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269163

The Hartford Working Group

Hartford, Illinois



Data Submittal for Hartford Interim Measures

Volume II

Prepared by:

ENSR Corporation

July 2004

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APPENDIX A

AIR TOXICS LTD. - LABORATORY REPORT 0406075

Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
060104-310-B East	310 N Delmar. Indoor air sample from the east end of the basement.	Indoor Air/24-hour Summa Canister	0406075A-01A	VOCs	TO-15
			0406075B-01A	Benzene rerun	Mod. TO-15
			0406075C-01A	Methane	ASTM D-1946
			0406075D-01A	Additional VOCs	@ 82 GC/FID
			0406075E-01A	VOCs	TO-15
060104-310-B West	310 N Delmar. Indoor air sample from the west end of the basement.	Indoor Air/24-hour Summa Canister	0406075A-02A	VOCs	TO-15
			0406075B-02A	Benzene rerun	Mod. TO-15
			0406075C-02A	Methane	ASTM D-1946
			0406075D-02A	Additional VOCs	@ 82 GC/FID
			0406075E-02A	VOCs	TO-15
060104-310 O South	310 N Delmar. Outdoor air sample collected outside of the south side of the house.	Outdoor Air/24-hour Summa Canister	0406075A-03A	VOCs	TO-15
			0406075B-03A	Benzene rerun	Mod. TO-15
			0406075C-03A	Methane	ASTM D-1946
			0406075D-03A	Additional VOCs	@ 82 GC/FID
			0406075E-03A	VOCs	TO-15



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406075A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford ICC 310 N Delmar
DATE RECEIVED:	6/3/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/24/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	060104-310-B East	Modified TO-15/TICs	5.0 "Hg
02A	060104-310-B West	Modified TO-15/TICs	2.5 "Hg
03A	060104-310-O South	Modified TO-15/TICs	4.5 "Hg
04A	Lab Blank	Modified TO-15/TICs	NA
05A	CCV	Modified TO-15/TICs	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/24/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406075A

Three 6 Liter Summa Canister samples were received on June 03, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

There were no analytical discrepancies.

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	23	Not Detected	75	Not Detected
Ethyl Benzene	23	Not Detected	100	Not Detected
Styrene	23	Not Detected	100	Not Detected
Toluene	23	Not Detected	88	Not Detected
1,2,4-Trimethylbenzene	23	Not Detected	110	Not Detected
1,3,5-Trimethylbenzene	23	Not Detected	110	Not Detected
m,p-Xylene	23	Not Detected	100	Not Detected
o-Xylene	23	Not Detected	100	Not Detected
Butane	92	2700	220	6600
1-Butene	92	Not Detected	210	Not Detected
cis-2-Butene	92	Not Detected	210	Not Detected
trans-2-butene	92	150	210	340
Cyclohexane	92	Not Detected	320	Not Detected
Cyclopentane	92	Not Detected	270	Not Detected
2,2-Dimethylbutane	92	Not Detected	330	Not Detected
2,3-Dimethylbutane	92	140	330	500
2,3-Dimethylpentane	92	200	380	860
2,4-Dimethylpentane	92	130	380	560
Heptane	92	Not Detected	380	Not Detected
Hexane	92	100	330	370
Isoprene	92	Not Detected	260	Not Detected
Cumene	92	Not Detected	460	Not Detected
Isopentane	92	2300	280	6800
Methylcyclohexane	92	Not Detected	380	Not Detected
Methylcyclopentane	92	Not Detected	320	Not Detected
2-Methylheptane	92	Not Detected	440	Not Detected
3-Methylheptane	92	Not Detected	440	Not Detected
2-Methylhexane	92	Not Detected	380	Not Detected
3-Methylhexane	92	Not Detected	380	Not Detected
2-Methylpentane	92	310	330	1100
3-Methylpentane	92	190	330	680
Isobutane	92	1100	220	2700
Nonane	92	Not Detected	490	Not Detected
Octane	92	Not Detected	440	Not Detected
Pentane	92	520	280	1600
1-Pentene	92	Not Detected	270	Not Detected
cis-2-Pentene	92	Not Detected	270	Not Detected
trans-2-Pentene	92	Not Detected	270	Not Detected
Propylbenzene	92	Not Detected	460	Not Detected
2,2,4-Trimethylpentane	92	250	440	1200
2,3,4-Trimethylpentane	92	Not Detected	440	Not Detected
1-Hexene	92	Not Detected	320	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	008231	060104-310-B East
File	008231	060104-310-B East

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	92	Not Detected	460	Not Detected
4-Ethyltoluene	92	Not Detected	460	Not Detected
2-Ethyltoluene	92	Not Detected	460	Not Detected
Decane	92	Not Detected	540	Not Detected
1,2,3-Trimethylbenzene	92	Not Detected	460	Not Detected
1,3-Diethylbenzene	92	Not Detected	510	Not Detected
1,4-Diethylbenzene	92	Not Detected	510	Not Detected
Undecane	92	Not Detected	600	Not Detected
cis-2-Hexene	230	Not Detected	800	Not Detected
trans-2-Hexene	230	Not Detected	800	Not Detected
alpha-Pinene	230	Not Detected	1300	Not Detected
beta-Pinene	230	Not Detected	1300	Not Detected
Cyclopentene	92	Not Detected	260	Not Detected
1-Undecene	230	Not Detected	1500	Not Detected
1-Decene	230	Not Detected	1300	Not Detected
1-Nonene	92	Not Detected	480	Not Detected
1-Octene	92	Not Detected	430	Not Detected
1-Heptene	92	Not Detected	380	Not Detected
1,3-Butadiene	23	Not Detected	52	Not Detected
TPH ref. to Gasoline (MW=100)	460	3600	1900	15000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	36	Not Detected	120	Not Detected
Ethyl Benzene	36	Not Detected	160	Not Detected
Styrene	36	Not Detected	160	Not Detected
Toluene	36	Not Detected	140	Not Detected
1,2,4-Trimethylbenzene	36	Not Detected	180	Not Detected
1,3,5-Trimethylbenzene	36	Not Detected	180	Not Detected
m,p-Xylene	36	Not Detected	160	Not Detected
o-Xylene	36	Not Detected	160	Not Detected
Butane	150	3800	350	9200
1-Butene	150	140 J	340	340
cis-2-Butene	150	Not Detected	340	Not Detected
trans-2-butene	150	250	340	580
Cyclohexane	150	Not Detected	510	Not Detected
Cyclopentane	150	Not Detected	420	Not Detected
2,2-Dimethylbutane	150	Not Detected	520	Not Detected
2,3-Dimethylbutane	150	210	520	770
2,3-Dimethylpentane	150	320	610	1300
2,4-Dimethylpentane	150	200	610	840
Heptane	150	Not Detected	610	Not Detected
Hexane	150	170	520	600
Isoprene	150	Not Detected	410	Not Detected
Cumene	150	Not Detected	730	Not Detected
Isopentane	150	3400	440	10000
Methylcyclohexane	150	Not Detected	600	Not Detected
Methylcyclopentane	150	Not Detected	510	Not Detected
2-Methylheptane	150	Not Detected	690	Not Detected
3-Methylheptane	150	Not Detected	690	Not Detected
2-Methylhexane	150	Not Detected	610	Not Detected
3-Methylhexane	150	Not Detected	610	Not Detected
2-Methylpentane	150	460	520	1600
3-Methylpentane	150	280	520	1000
Isobutane	150	1500	350	3600
Nonane	150	Not Detected	780	Not Detected
Octane	150	Not Detected	690	Not Detected
Pentane	150	810	440	2400
1-Pentene	150	Not Detected	420	Not Detected
cis-2-Pentene	150	Not Detected	420	Not Detected
trans-2-Pentene	150	Not Detected	420	Not Detected
Propylbenzene	150	Not Detected	730	Not Detected
2,2,4-Trimethylpentane	150	380	690	1800
2,3,4-Trimethylpentane	150	Not Detected	690	Not Detected
1-Hexene	150	Not Detected	510	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	150	Not Detected	730	Not Detected
4-Ethyltoluene	150	Not Detected	730	Not Detected
2-Ethyltoluene	150	Not Detected	730	Not Detected
Decane	150	Not Detected	860	Not Detected
1,2,3-Trimethylbenzene	150	Not Detected	730	Not Detected
1,3-Diethylbenzene	150	Not Detected	810	Not Detected
1,4-Diethylbenzene	150	Not Detected	810	Not Detected
Undecane	150	Not Detected	950	Not Detected
cis-2-Hexene	360	Not Detected	1300	Not Detected
trans-2-Hexene	360	Not Detected	1300	Not Detected
alpha-Pinene	360	Not Detected	2100	Not Detected
beta-Pinene	360	Not Detected	2100	Not Detected
Cyclopentene	150	Not Detected	410	Not Detected
1-Undecene	360	Not Detected	2300	Not Detected
1-Decene	360	Not Detected	2100	Not Detected
1-Nonene	150	Not Detected	770	Not Detected
1-Octene	150	Not Detected	680	Not Detected
1-Heptene	150	Not Detected	600	Not Detected
1,3-Butadiene	36	Not Detected	82	Not Detected
TPH ref. to Gasoline (MW=100)	730	4700	3000	20000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.79	Not Detected	2.6	Not Detected
Ethyl Benzene	0.79	Not Detected	3.5	Not Detected
Styrene	0.79	Not Detected	3.4	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
m,p-Xylene	0.79	Not Detected	3.5	Not Detected
o-Xylene	0.79	Not Detected	3.5	Not Detected
Butane	3.2	6.2	7.6	15
1-Butene	3.2	Not Detected	7.4	Not Detected
cis-2-Butene	3.2	Not Detected	7.4	Not Detected
trans-2-butene	3.2	Not Detected	7.4	Not Detected
Cyclohexane	3.2	Not Detected	11	Not Detected
Cyclopentane	3.2	Not Detected	9.2	Not Detected
2,2-Dimethylbutane	3.2	Not Detected	11	Not Detected
2,3-Dimethylbutane	3.2	Not Detected	11	Not Detected
2,3-Dimethylpentane	3.2	Not Detected	13	Not Detected
2,4-Dimethylpentane	3.2	Not Detected	13	Not Detected
Heptane	3.2	Not Detected	13	Not Detected
Hexane	3.2	Not Detected	11	Not Detected
Isoprene	3.2	Not Detected	8.9	Not Detected
Cumene	3.2	Not Detected	16	Not Detected
Isopentane	3.2	9.7	9.5	29
Methylcyclohexane	3.2	Not Detected	13	Not Detected
Methylcyclopentane	3.2	Not Detected	11	Not Detected
2-Methylheptane	3.2	Not Detected	15	Not Detected
3-Methylheptane	3.2	Not Detected	15	Not Detected
2-Methylhexane	3.2	Not Detected	13	Not Detected
3-Methylhexane	3.2	Not Detected	13	Not Detected
2-Methylpentane	3.2	Not Detected	11	Not Detected
3-Methylpentane	3.2	Not Detected	11	Not Detected
Isobutane	3.2	5.9	7.6	14
Nonane	3.2	Not Detected	17	Not Detected
Octane	3.2	Not Detected	15	Not Detected
Pentane	3.2	Not Detected	9.5	Not Detected
1-Pentene	3.2	Not Detected	9.2	Not Detected
cis-2-Pentene	3.2	Not Detected	9.2	Not Detected
trans-2-Pentene	3.2	Not Detected	9.2	Not Detected
Propylbenzene	3.2	Not Detected	16	Not Detected
2,2,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
2,3,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
1-Hexene	3.2	Not Detected	11	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	060104-310-O	COLLECTED DATE	02/27/04
REPORT		ANALYST	0406075A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	3.2	Not Detected	16	Not Detected
4-Ethyltoluene	3.2	Not Detected	16	Not Detected
2-Ethyltoluene	3.2	Not Detected	16	Not Detected
Decane	3.2	Not Detected	19	Not Detected
1,2,3-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,3-Diethylbenzene	3.2	Not Detected	18	Not Detected
1,4-Diethylbenzene	3.2	Not Detected	18	Not Detected
Undecane	3.2	Not Detected	20	Not Detected
cis-2-Hexene	7.9	Not Detected	28	Not Detected
trans-2-Hexene	7.9	Not Detected	28	Not Detected
alpha-Pinene	7.9	Not Detected	45	Not Detected
beta-Pinene	7.9	Not Detected	45	Not Detected
Cyclopentene	3.2	Not Detected	8.9	Not Detected
1-Undecene	7.9	Not Detected	50	Not Detected
1-Decene	7.9	Not Detected	46	Not Detected
1-Nonene	3.2	Not Detected	16	Not Detected
1-Octene	3.2	Not Detected	15	Not Detected
1-Heptene	3.2	Not Detected	13	Not Detected
1,3-Butadiene	0.79	Not Detected	1.8	Not Detected
TPH ref. to Gasoline (MW=100)	16	Not Detected	66	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Report Date: 05/23/11	Sample Collection Date: 05/23/11
Report Time: 10:00	Sample Time: 02:00:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	42	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME: 0406075A-05A	DATE: 06/10/2010	TIME: 10:00:00
NO. TUBES: 1	INLET: 1	OUTLET: 1

Compound	%Recovery
Benzene	100
Ethyl Benzene	98
Styrene	106
Toluene	100
1,2,4-Trimethylbenzene	101
1,3,5-Trimethylbenzene	102
m,p-Xylene	100
o-Xylene	98
Butane	96
1-Butene	89
cis-2-Butene	103
trans-2-butene	104
Cyclohexane	103
Cyclopentane	106
2,2-Dimethylbutane	102
2,3-Dimethylbutane	103
2,3-Dimethylpentane	100
2,4-Dimethylpentane	100
Heptane	104
Hexane	101
Isoprene	102
Cumene	101
Isopentane	104
Methylcyclohexane	101
Methylcyclopentane	99
2-Methylheptane	102
3-Methylheptane	100
2-Methylhexane	102
3-Methylhexane	103
2-Methylpentane	105
3-Methylpentane	102
Isobutane	104
Nonane	102
Octane	101
Pentane	102
1-Pentene	102
cis-2-Pentene	103
trans-2-Pentene	103
Propylbenzene	114
2,2,4-Trimethylpentane	102
2,3,4-Trimethylpentane	98
1-Hexene	106

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	506230	Date of Collection	01/20/2005
Site	101	Date of Analysis	02/01/2005

Compound	%Recovery
3-Ethyltoluene	110
4-Ethyltoluene	106
2-Ethyltoluene	106
Decane	100
1,2,3-Trimethylbenzene	106
1,3-Diethylbenzene	102
1,4-Diethylbenzene	101
Undecane	99
cis-2-Hexene	108
trans-2-Hexene	106
alpha-Pinene	94
beta-Pinene	88
Cyclopentene	104
1-Undecene	77
1-Decene	89
1-Nonene	99
1-Octene	102
1-Heptene	103
1,3-Butadiene	108
TPH ref. to Gasoline (MW=100)	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Contact Person <u>Rob Schilling</u> Company <u>ENVSC</u> Address <u>27755 Diehl</u> City <u>WATSONVILLE</u> State <u>CA</u> Zip <u>95035</u> Phone <u>630-836-1700</u> FAX <u>630-836-1714</u> Collected By: Signature <u>Jeff Bermingham</u>		Project Info: P.O. # <u>01005-093-360</u> Project # <u>01005-093-360</u> Project Name <u>Hartford, IL</u> <u>310 N Oakman</u>		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify <u>mw 6/19/97</u>	
Analyses Requested		Canister Pressure / Vacuum			
Lab I.D.	Field Sample I.D.	Date & Time	Initial	Final	Receipt
01A	060104-310-B EAST	6/10/97 1708		-30.0	-3.6
02A	060104-310-B WEST	6/10/97 1706		-29.8	-2.0
03A	060104-310-C South	6/10/97 1710		-28.1	-3.2
Notes: SN 22497 SN #427 SN 102J modified TO15 (chlorinated Solvents) as per Q4024417 & List-Air Toxics method Q.8.2 on per Q4024417 Q.4.4 method modified ASTM - 0-1946 00 per Q4024417					
Received By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/10/97 1730</u>		Received By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/13/97</u>			
Place used By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/10/97 1730</u>		Place used By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/13/97</u>			
Shipped By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/10/97 1730</u>		Shipped By: Signature <u>Jeff Bermingham</u> Date/Time <u>6/13/97</u>			
Shipper Name: <u>F-EX</u>		Condition: <u>Good</u>		Custody Seals intact? <u>Yes</u> No <u>None</u>	
Lab. Use Only: <u>830677445947-CA</u>		Temp. (°C): <u>60.0</u>		Work Order #: <u>0406075A</u>	



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406075B

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford ICC 310 N Delmar

DATE RECEIVED: 6/3/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 6/17/2004

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	060104-310-B East	Modified TO-15	5.0 "Hg
02A	060104-310-B West	Modified TO-15	2.5 "Hg
03A	060104-310-O South	Modified TO-15	4.5 "Hg
03AA	060104-310-O South Duplicate	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA
04B	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
05B	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA
06B	LCS	Modified TO-15	NA

CERTIFIED BY:

Sandra A. Freeman

Laboratory Director

DATE: 06/17/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406075B

Three 6 Liter Summa Canister samples were received on June 03, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	<= 30 %RSD (TO-14A)	<= 30 % RSD with 2 compounds allowed out to <= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.32	1.9	1.0	6.2

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

060104-310-B West	0406075B-02A	060104-310-B West
060104-310-B West	0406075B-02A	060104-310-B West

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.29	5.5	0.95	18

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.32	0.75	1.0	2.4

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South Duplicate

ID#: 0406075B-03AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method: TO-15 GC/MS Full Scan
Sample Name: 060104-310-O South Duplicate
ID#: 0406075B-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.32	0.80	1.0	2.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075B-04B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method	0406075B-04B	Sample Name	Lab Blank
Sample	0406075B-04B	Sample ID	0406075B-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected
Container Type: NA - Not Applicable				
Surrogates	%Recovery			Method Limits
Toluene-d8	100			70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		88
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075B-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		84
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery	
Benzene	106	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075B-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method:	GC/MS	Sample Name:	LCS
Ref. Method:	TO-15	ID#:	0406075B-06B

Compound		%Recovery
Benzene		92
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



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Page 1 of 1

From 123 new 19

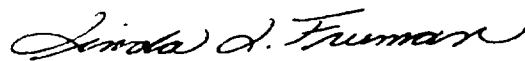
WORK ORDER #: 0406075C

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford ICC 310 N
DATE RECEIVED:	6/3/2004	CONTACT:	Delmar DeDe Dodge
DATE COMPLETED:	6/14/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	060104-310-B East	Modified ASTM D-1946	5.0 "Hg
01AA	060104-310-B East Duplicate	Modified ASTM D-1946	5.0 "Hg
02A	060104-310-B West	Modified ASTM D-1946	2.5 "Hg
03A	060104-310-O South	Modified ASTM D-1946	4.5 "Hg
04A	Lab Blank	Modified ASTM D-1946	NA
05A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:



Laboratory Director

DATE: 06/16/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406075C

Three 6 Liter Summa Canister samples were received on June 03, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane in air using GC/FID. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for Methane.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

rl-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	0.00093

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East Duplicate

ID#: 0406075C-01AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name	0060015	DISPATCH
-----------	---------	----------

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	0.00072

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	0.00066

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

060104-310-O South	0406075C-03A	0.00023
--------------------	--------------	---------

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	0.00023

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9060913	Date of Collection:	NA
Client:	9060913	Date of Analysis:	02-04-08

Compound	%Recovery
Methane	99

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

Contact Person <u>Ruben Schilling / Dave Schumacher</u>		Project Info:		Turn Around Time:	
Company <u>E. W. S. C.</u>		P.O. # <u>01005-043-360</u>		<input checked="" type="checkbox"/> Normal	
Address <u>27755 D. W. H. City Wagon 12 State 125 Zip 95635</u>		Project Name <u>Hartford Jr. High School</u>		<input type="checkbox"/> Rush	
Phone <u>630-854-1700</u> FAX <u>630-854-1711</u>		DIC N <u>delmarc</u>		Specify <u>mm 06/15</u>	
Collected By: Signature <u>[Signature]</u>		Analyses Requested		Canister Pressure / Vacuum	
Lab I.D.	Field Sample I.D.	Date & Time	Initial	Final	Receipt
<u>01A</u>	<u>060104-310-B East</u>	<u>6/1/04 1708</u>	<u>30.0</u>	<u>-3.6</u>	<u>5.0" Hg</u>
<u>02A</u>	<u>060104-310-B West</u>	<u>6/1/04 1706</u>	<u>29.8</u>	<u>-2.0</u>	<u>2.5" Hg</u>
<u>03A</u>	<u>060104-310-O South</u>	<u>6/1/04 1755</u>	<u>28.1</u>	<u>-3.2</u>	<u>4.5" Hg</u>
Notes: SN 22497 SN 4427 SN 102J Auth. Paul TC 155 (Chlorinated Solvents) on pm 6/1/04 1717 List: A12 TC 155 Auth. 6/1/04 1717 Auth. 6/1/04 1717 Auth. 6/1/04 1717					
Received By: Signature <u>[Signature]</u> Date/Time <u>6/3/04</u>		Condition <u>Good</u>		Custody Seals Intact? <u>Yes</u>	
Received By: Signature <u>[Signature]</u> Date/Time <u>6/3/04</u>		Temp. (°C) <u>100</u>		Work Order # <u>04060750</u>	
Received By: Signature <u>[Signature]</u> Date/Time <u>6/3/04</u>		Shipper Name <u>F. E. X.</u>		Air Bill # <u>830677445947-114</u>	
Received By: Signature <u>[Signature]</u> Date/Time <u>6/3/04</u>		Lab Use Only			



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406075D

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford ICC 310 N
DATE RECEIVED:	6/3/2004	CONTACT:	Delmar DeDe Dodge
DATE COMPLETED:	6/17/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	060104-310-B East	Air Toxics Ltd. @ 82	5.0 "Hg
01AA	060104-310-B East Duplicate	Air Toxics Ltd. @ 82	5.0 "Hg
02A	060104-310-B West	Air Toxics Ltd. @ 82	2.5 "Hg
03A	060104-310-O South	Air Toxics Ltd. @ 82	4.5 "Hg
04A	Lab Blank	Air Toxics Ltd. @ 82	NA
05A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/17/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406075D

Three 6 Liter Summa Canister samples were received on June 03, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of a 1.0 ml sample through a fixed sampling loop followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075D-01A

AIT TOXICS LTD. @ 82 GC/FID

FID No.	203101	DATE OF COLLECTION	01/10/01
DILUTION	1	REPORTED BY	AWIND

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	80	120
Ethene	80	Not Detected
Acetylene	80	Not Detected
Propane	80	Not Detected
Propylene	80	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East Duplicate

ID#: 0406075D-01AA

AIT TOXICS LTD. @ 82 GC/FID

01/17/01	060104-310-B	0406075D-01AA
01/17/01	060104-310-B	0406075D-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	80	110
Ethene	80	Not Detected
Acetylene	80	Not Detected
Propane	80	Not Detected
Propylene	80	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075D-02A

AIT TOXICS LTD. @ 82 GC/FID

File Name	20510	File Path	060104-310-B West
File Name	0406075D-02A	File Path	0406075D-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	73	100
Ethene	73	Not Detected
Acetylene	73	Not Detected
Propane	73	91
Propylene	73	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075D-03A

AIT TOXICS LTD. @ 82 GC/FID

06/21/04	0406075D-03A	060104-310-O South
06/21/04	0406075D-03A	060104-310-O South

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	79	Not Detected
Ethene	79	Not Detected
Acetylene	79	Not Detected
Propane	79	Not Detected
Propylene	79	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075D-04A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075D-05A

AIT TOXICS LTD. @ 82 GC/FID

DATE	TIME	ANALYST
01/15/11	11:11	DELENA, J. (11/15/11)

Compound	%Recovery
Ethane	107
Ethene	111
Acetylene	114
Propane	110
Propylene	113

Container Type: NA - Not Applicable



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406075E

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford ICC 310 N Delmar

DATE RECEIVED: 6/3/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/17/04

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	060104-310-B East	Modified TO-15	5.0 "Hg
02A	060104-310-B West	Modified TO-15	2.5 "Hg
03A	060104-310-O South	Modified TO-15	4.5 "Hg
03AA	060104-310-O South Duplicate	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/17/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406075E

Three 6 Liter Summa Canister samples were received on June 03, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample 0406075E-02A due to the presence of high level non-target species.

The daily calibration standard (CCV) analyzed on 6-11-04 did not meet laboratory required acceptance criteria of 70-130% recovery for Bromoform. Recovery was high and no hits were detected in the associated samples. There was no impact on sample results.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075E-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.80	Not Detected	4.0	Not Detected
Freon 114	0.80	Not Detected	5.7	Not Detected
Chloromethane	3.2	Not Detected	6.8	Not Detected
Vinyl Chloride	0.80	Not Detected	2.1	Not Detected
1,3-Butadiene	0.80	Not Detected	1.8	Not Detected
Bromomethane	0.80	Not Detected	3.2	Not Detected
Chloroethane	0.80	Not Detected	2.2	Not Detected
Freon 11	0.80	Not Detected	4.6	Not Detected
Ethanol	3.2	22	6.2	42
Freon 113	0.80	Not Detected	6.3	Not Detected
1,1-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Acetone	3.2	7.3	7.8	18
2-Propanol	3.2	5.1	8.0	13
Carbon Disulfide	0.80	Not Detected	2.5	Not Detected
3-Chloropropene	3.2	Not Detected	10	Not Detected
Methylene Chloride	0.80	Not Detected	2.8	Not Detected
Methyl tert-butyl ether	0.80	Not Detected	2.9	Not Detected
trans-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Hexane	0.80	74	2.9	260
Vinyl Acetate	3.2	Not Detected	12	Not Detected
1,1-Dichloroethane	0.80	Not Detected	3.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.80	2.5	2.4	7.6
cis-1,2-Dichloroethene	0.80	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.80	Not Detected	2.4	Not Detected
Chloroform	0.80	Not Detected	4.0	Not Detected
1,1,1-Trichloroethane	0.80	Not Detected	4.5	Not Detected
Cyclohexane	0.80	16	2.8	57
Carbon Tetrachloride	0.80	Not Detected	5.1	Not Detected
2,2,4-Trimethylpentane	0.80	200	3.8	980
Benzene	0.80	1.9	2.6	6.2
1,2-Dichloroethane	0.80	Not Detected	3.3	Not Detected
Heptane	0.80	17	3.4	71
Trichloroethene	0.80	Not Detected	4.4	Not Detected
1,2-Dichloropropane	0.80	Not Detected	3.8	Not Detected
1,4-Dioxane	3.2	Not Detected	12	Not Detected
Bromodichloromethane	0.80	Not Detected	5.5	Not Detected
cis-1,3-Dichloropropene	0.80	Not Detected	3.7	Not Detected
4-Methyl-2-pentanone	0.80	Not Detected	3.4	Not Detected
Toluene	0.80	1.5	3.1	5.9
trans-1,3-Dichloropropene	0.80	Not Detected	3.7	Not Detected
1,1,2-Trichloroethane	0.80	Not Detected	4.5	Not Detected
Tetrachloroethene	0.80	Not Detected	5.6	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B East

ID#: 0406075E-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.2	Not Detected	13	Not Detected
Dibromochloromethane	0.80	Not Detected	7.0	Not Detected
1,2-Dibromoethane (EDB)	0.80	Not Detected	6.3	Not Detected
Chlorobenzene	0.80	Not Detected	3.8	Not Detected
Ethyl Benzene	0.80	Not Detected	3.6	Not Detected
m,p-Xylene	0.80	0.83	3.6	3.7
o-Xylene	0.80	Not Detected	3.6	Not Detected
Styrene	0.80	Not Detected	3.5	Not Detected
Bromoform	0.80	Not Detected	8.4	Not Detected
Cumene	0.80	Not Detected	4.0	Not Detected
1,1,2,2-Tetrachloroethane	0.80	Not Detected	5.6	Not Detected
Propylbenzene	0.80	Not Detected	4.0	Not Detected
4-Ethyltoluene	0.80	Not Detected	4.0	Not Detected
1,3,5-Trimethylbenzene	0.80	Not Detected	4.0	Not Detected
1,2,4-Trimethylbenzene	0.80	Not Detected	4.0	Not Detected
1,3-Dichlorobenzene	0.80	Not Detected	4.9	Not Detected
1,4-Dichlorobenzene	0.80	Not Detected	4.9	Not Detected
alpha-Chlorotoluene	0.80	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.80	Not Detected	4.9	Not Detected
1,2,4-Trichlorobenzene	3.2	Not Detected	24	Not Detected
Hexachlorobutadiene	3.2	Not Detected	35	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075E-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	2.9	Not Detected	15	Not Detected
Freon 114	2.9	Not Detected	21	Not Detected
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	2.9	Not Detected	7.6	Not Detected
1,3-Butadiene	2.9	Not Detected	6.6	Not Detected
Bromomethane	2.9	Not Detected	12	Not Detected
Chloroethane	2.9	Not Detected	7.8	Not Detected
Freon 11	2.9	Not Detected	17	Not Detected
Ethanol	12	43	22	82
Freon 113	2.9	Not Detected	23	Not Detected
1,1-Dichloroethene	2.9	Not Detected	12	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	12	Not Detected	29	Not Detected
Carbon Disulfide	2.9	Not Detected	9.2	Not Detected
3-Chloropropene	12	Not Detected	37	Not Detected
Methylene Chloride	2.9	Not Detected	10	Not Detected
Methyl tert-butyl ether	2.9	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	2.9	Not Detected	12	Not Detected
Hexane	2.9	120	10	420
Vinyl Acetate	12	Not Detected	42	Not Detected
1,1-Dichloroethane	2.9	Not Detected	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.9	Not Detected	8.8	Not Detected
cis-1,2-Dichloroethene	2.9	Not Detected	12	Not Detected
Tetrahydrofuran	2.9	Not Detected	8.8	Not Detected
Chloroform	2.9	Not Detected	14	Not Detected
1,1,1-Trichloroethane	2.9	Not Detected	16	Not Detected
Cyclohexane	2.9	28	10	99
Carbon Tetrachloride	2.9	Not Detected	19	Not Detected
2,2,4-Trimethylpentane	2.9	310	14	1500
Benzene	2.9	6.4	9.5	21
1,2-Dichloroethane	2.9	Not Detected	12	Not Detected
Heptane	2.9	30	12	120
Trichloroethene	2.9	Not Detected	16	Not Detected
1,2-Dichloropropane	2.9	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	43	Not Detected
Bromodichloromethane	2.9	Not Detected	20	Not Detected
cis-1,3-Dichloropropene	2.9	Not Detected	13	Not Detected
4-Methyl-2-pentanone	2.9	Not Detected	12	Not Detected
Toluene	2.9	3.0	11	12
trans-1,3-Dichloropropene	2.9	Not Detected	13	Not Detected
1,1,2-Trichloroethane	2.9	Not Detected	16	Not Detected
Tetrachloroethene	2.9	Not Detected	20	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-B West

ID#: 0406075E-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	12	Not Detected	49	Not Detected
Dibromochloromethane	2.9	Not Detected	25	Not Detected
1,2-Dibromoethane (EDB)	2.9	Not Detected	23	Not Detected
Chlorobenzene	2.9	Not Detected	14	Not Detected
Ethyl Benzene	2.9	Not Detected	13	Not Detected
m,p-Xylene	2.9	Not Detected	13	Not Detected
o-Xylene	2.9	Not Detected	13	Not Detected
Styrene	2.9	Not Detected	13	Not Detected
Bromoform	2.9	Not Detected	31	Not Detected
Cumene	2.9	Not Detected	14	Not Detected
1,1,2,2-Tetrachloroethane	2.9	Not Detected	20	Not Detected
Propylbenzene	2.9	Not Detected	14	Not Detected
4-Ethyltoluene	2.9	Not Detected	14	Not Detected
1,3,5-Trimethylbenzene	2.9	Not Detected	14	Not Detected
1,2,4-Trimethylbenzene	2.9	Not Detected	14	Not Detected
1,3-Dichlorobenzene	2.9	Not Detected	18	Not Detected
1,4-Dichlorobenzene	2.9	Not Detected	18	Not Detected
alpha-Chlorotoluene	2.9	Not Detected	15	Not Detected
1,2-Dichlorobenzene	2.9	Not Detected	18	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	88	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075E-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.79	Not Detected	4.0	Not Detected
Freon 114	0.79	Not Detected	5.6	Not Detected
Chloromethane	3.2	Not Detected	6.6	Not Detected
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
1,3-Butadiene	0.79	Not Detected	1.8	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.79	Not Detected	4.5	Not Detected
Ethanol	3.2	Not Detected	6.0	Not Detected
Freon 113	0.79	Not Detected	6.2	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Acetone	3.2	Not Detected	7.6	Not Detected
2-Propanol	3.2	Not Detected	7.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	3.2	Not Detected	10	Not Detected
Methylene Chloride	0.79	Not Detected	2.8	Not Detected
Methyl tert-butyl ether	0.79	Not Detected	2.9	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Hexane	0.79	Not Detected	2.8	Not Detected
Vinyl Acetate	3.2	Not Detected	11	Not Detected
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.4	Not Detected
Chloroform	0.79	Not Detected	3.9	Not Detected
1,1,1-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Cyclohexane	0.79	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.79	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.8	Not Detected
Benzene	0.79	Not Detected	2.6	Not Detected
1,2-Dichloroethane	0.79	Not Detected	3.2	Not Detected
Heptane	0.79	Not Detected	3.3	Not Detected
Trichloroethene	0.79	Not Detected	4.3	Not Detected
1,2-Dichloropropane	0.79	Not Detected	3.7	Not Detected
1,4-Dioxane	3.2	Not Detected	12	Not Detected
Bromodichloromethane	0.79	Not Detected	5.4	Not Detected
cis-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.79	Not Detected	3.3	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
trans-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Tetrachloroethene	0.79	Not Detected	5.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South

ID#: 0406075E-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.2	Not Detected	13	Not Detected
Dibromochloromethane	0.79	Not Detected	6.8	Not Detected
1,2-Dibromoethane (EDB)	0.79	Not Detected	6.2	Not Detected
Chlorobenzene	0.79	Not Detected	3.7	Not Detected
Ethyl Benzene	0.79	Not Detected	3.5	Not Detected
m,p-Xylene	0.79	Not Detected	3.5	Not Detected
o-Xylene	0.79	Not Detected	3.5	Not Detected
Styrene	0.79	Not Detected	3.4	Not Detected
Bromoform	0.79	Not Detected	8.3	Not Detected
Cumene	0.79	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.79	Not Detected	5.5	Not Detected
Propylbenzene	0.79	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,4-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
alpha-Chlorotoluene	0.79	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,2,4-Trichlorobenzene	3.2	Not Detected	24	Not Detected
Hexachlorobutadiene	3.2	Not Detected	34	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South Duplicate

ID#: 0406075E-03AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	060104-310-O South Duplicate	Sample/Reference	060104-310-O South Duplicate
Operator	13	Date of Analysis	06/01/04

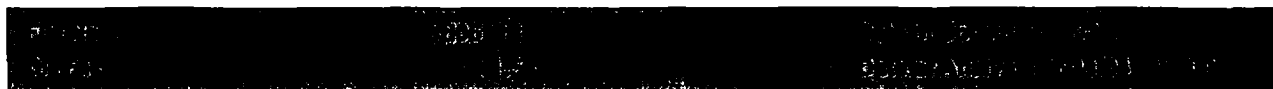
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.79	Not Detected	4.0	Not Detected
Freon 114	0.79	Not Detected	5.6	Not Detected
Chloromethane	3.2	Not Detected	6.6	Not Detected
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
1,3-Butadiene	0.79	Not Detected	1.8	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.79	Not Detected	4.5	Not Detected
Ethanol	3.2	Not Detected	6.0	Not Detected
Freon 113	0.79	Not Detected	6.2	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Acetone	3.2	Not Detected	7.6	Not Detected
2-Propanol	3.2	Not Detected	7.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	3.2	Not Detected	10	Not Detected
Methylene Chloride	0.79	Not Detected	2.8	Not Detected
Methyl tert-butyl ether	0.79	Not Detected	2.9	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Hexane	0.79	Not Detected	2.8	Not Detected
Vinyl Acetate	3.2	Not Detected	11	Not Detected
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.4	Not Detected
Chloroform	0.79	Not Detected	3.9	Not Detected
1,1,1-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Cyclohexane	0.79	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.79	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.8	Not Detected
Benzene	0.79	0.80	2.6	2.6
1,2-Dichloroethane	0.79	Not Detected	3.2	Not Detected
Heptane	0.79	Not Detected	3.3	Not Detected
Trichloroethene	0.79	Not Detected	4.3	Not Detected
1,2-Dichloropropane	0.79	Not Detected	3.7	Not Detected
1,4-Dioxane	3.2	Not Detected	12	Not Detected
Bromodichloromethane	0.79	Not Detected	5.4	Not Detected
cis-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.79	Not Detected	3.3	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
trans-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Tetrachloroethene	0.79	Not Detected	5.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 060104-310-O South Duplicate

ID#: 0406075E-03AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.2	Not Detected	13	Not Detected
Dibromochloromethane	0.79	Not Detected	6.8	Not Detected
1,2-Dibromoethane (EDB)	0.79	Not Detected	6.2	Not Detected
Chlorobenzene	0.79	Not Detected	3.7	Not Detected
Ethyl Benzene	0.79	Not Detected	3.5	Not Detected
m,p-Xylene	0.79	Not Detected	3.5	Not Detected
o-Xylene	0.79	Not Detected	3.5	Not Detected
Styrene	0.79	Not Detected	3.4	Not Detected
Bromoform	0.79	Not Detected	8.3	Not Detected
Cumene	0.79	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.79	Not Detected	5.5	Not Detected
Propylbenzene	0.79	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,4-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
alpha-Chlorotoluene	0.79	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,2,4-Trichlorobenzene	3.2	Not Detected	24	Not Detected
Hexachlorobutadiene	3.2	Not Detected	34	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075E-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406075E-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075E-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	105
Freon 114	101
Chloromethane	94
Vinyl Chloride	88
1,3-Butadiene	74
Bromomethane	82
Chloroethane	105
Freon 11	93
Ethanol	75
Freon 113	95
1,1-Dichloroethene	82
Acetone	72
2-Propanol	76
Carbon Disulfide	80
3-Chloropropene	73
Methylene Chloride	84
Methyl tert-butyl ether	85
trans-1,2-Dichloroethene	82
Hexane	78
Vinyl Acetate	86
1,1-Dichloroethane	86
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	92
Tetrahydrofuran	84
Chloroform	98
1,1,1-Trichloroethane	101
Cyclohexane	96
Carbon Tetrachloride	108
2,2,4-Trimethylpentane	91
Benzene	88
1,2-Dichloroethane	100
Heptane	102
Trichloroethene	107
1,2-Dichloropropane	100
1,4-Dioxane	99
Bromodichloromethane	110
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	102
Toluene	100
trans-1,3-Dichloropropene	113
1,1,2-Trichloroethane	108
Tetrachloroethene	122

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406075E-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	103
Dibromochloromethane	124
1,2-Dibromoethane (EDB)	114
Chlorobenzene	107
Ethyl Benzene	106
m,p-Xylene	109
o-Xylene	104
Styrene	108
Bromoform	131 Q
Cumene	98
1,1,2,2-Tetrachloroethane	99
Propylbenzene	98
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	106
alpha-Chlorotoluene	79
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	93
Hexachlorobutadiene	102

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075E-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	113
Freon 114	105
Chloromethane	99
Vinyl Chloride	99
1,3-Butadiene	75
Bromomethane	92
Chloroethane	125
Freon 11	100
Ethanol	86
Freon 113	96
1,1-Dichloroethene	86
Acetone	78
2-Propanol	71
Carbon Disulfide	86
3-Chloropropene	70
Methylene Chloride	81
Methyl tert-butyl ether	92
trans-1,2-Dichloroethene	88
Hexane	85
Vinyl Acetate	102
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	94
Tetrahydrofuran	98
Chloroform	105
1,1,1-Trichloroethane	116
Cyclohexane	103
Carbon Tetrachloride	120
2,2,4-Trimethylpentane	84
Benzene	106
1,2-Dichloroethane	117
Heptane	108
Trichloroethene	124
1,2-Dichloropropane	121
1,4-Dioxane	112
Bromodichloromethane	115
cis-1,3-Dichloropropene	125
4-Methyl-2-pentanone	120
Toluene	110
trans-1,3-Dichloropropene	133 Q
1,1,2-Trichloroethane	119
Tetrachloroethene	130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406075E-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	123
Dibromochloromethane	126
1,2-Dibromoethane (EDB)	116
Chlorobenzene	116
Ethyl Benzene	110
m,p-Xylene	112
o-Xylene	106
Styrene	118
Bromoform	119
Cumene	93
1,1,2,2-Tetrachloroethane	110
Propylbenzene	69
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	106
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	124
Hexachlorobutadiene	124

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Requishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Requiring signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4322

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Page 1 of 1

Contact Person Rene Schilling / Dave Schilling
Company ENRSC
Address 27755 DICK City WASH DC State DC Zip 20555
Phone 630-856-1700 FAX 630-836-1711
Collected By: Signature Rene Schilling

Project Info:

P.O. # _____
Project # Q1005-07.3-360
Project Name HARTWICK ILL
DIC N. ILLINOIS

Turn Around Time:

☒ Normal
☐ Rush _____ Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
				Initial	Final
Q1A	060104-310-B EAST	6/1/04 1700	methane	-30.0	-3.6
Q2A	060104-310-B WEST	6/1/04 1706	methane	-29.8	-2.0
Q3A	060104-310-B SOUTH	6/1/04 1710	methane	-28.1	-3.2

Received By: (Signature) Rene Schilling Date/Time 6/3/04 1730

Received By: (Signature) _____ Date/Time _____

Received By: (Signature) _____ Date/Time _____

Received By: (Signature) _____ Date/Time _____

Air Bill # 830677445947-01A

Condition GOOD

Custody Seals intact? None

Work Order # 04060757

Lab Use Only

Notes: SN 22497 SW #427 SN 1021
with final TO-15 (Chlorinated Solvents) on pm 6/1/04 1710
1st - 3rd TO-15 (Chlorinated Solvents) on pm 6/1/04 1710
Methane with final ASH = 0 - 1746 on pm 6/1/04 1710

APPENDIX B**AIR TOXICS LTD. - LABORATORY REPORT 0406121**

Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
MW-3 Grab	Vapor sample from monitoring well HMW-3 located on the north end of North Olive street; sample collected inside well casing approximately 1 foot below.	Soil Vapor/Grab Summa Canister	0406121A-01A	VOCs	TO-15
			0406121ARI-01A	VOCs	TO-15
			0406121B-01A	Benzene rerun	Mod. TO-15
			0406121C-01A	Methane	ASTM D-1946
			0406121D-01A	Additional VOCs	@ 82 GC/FID
			0406121E-01A	VOCs	TO-15



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406121A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005093 Hartford ICC
DATE RECEIVED:	6/7/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/28/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MW-3 Grab	Modified TO-15/TICs	6.0 "Hg
02A	Lab Blank	Modified TO-15/TICs	NA
03A	CCV	Modified TO-15/TICs	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406121A

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction not performed).

- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	2700	3400	8700	11000
Ethyl Benzene	2700	Not Detected	12000	Not Detected
Styrene	2700	Not Detected	12000	Not Detected
Toluene	2700	Not Detected	10000	Not Detected
1,2,4-Trimethylbenzene	2700	Not Detected	13000	Not Detected
1,3,5-Trimethylbenzene	2700	Not Detected	13000	Not Detected
m,p-Xylene	2700	Not Detected	12000	Not Detected
o-Xylene	2700	Not Detected	12000	Not Detected
Butane	11000	230000	26000	550000
1-Butene	11000	Not Detected	25000	Not Detected
cis-2-Butene	11000	Not Detected	25000	Not Detected
trans-2-butene	11000	Not Detected	25000	Not Detected
Cyclohexane	11000	10000 J	38000	37000 J
Cyclopentane	11000	12000	31000	37000
2,2-Dimethylbutane	11000	Not Detected	38000	Not Detected
2,3-Dimethylbutane	11000	22000	38000	79000
2,3-Dimethylpentane	11000	18000	45000	73000
2,4-Dimethylpentane	11000	12000	45000	50000
Heptane	11000	Not Detected	45000	Not Detected
Hexane	11000	32000	38000	110000
Isoprene	11000	Not Detected	30000	Not Detected
Cumene	11000	Not Detected	54000	Not Detected
Isopentane	11000	190000	32000	580000
Methylcyclohexane	11000	Not Detected	44000	Not Detected
Methylcyclopentane	11000	33000	38000	120000
2-Methylheptane	11000	Not Detected	51000	Not Detected
3-Methylheptane	11000	Not Detected	51000	Not Detected
2-Methylhexane	11000	15000	45000	61000
3-Methylhexane	11000	15000	45000	63000
2-Methylpentane	11000	87000	38000	310000
3-Methylpentane	11000	57000	38000	200000
Isobutane	11000	140000	26000	340000
Nonane	11000	Not Detected	57000	Not Detected
Octane	11000	Not Detected	51000	Not Detected
Pentane	11000	130000	32000	400000
1-Pentene	11000	Not Detected	31000	Not Detected
cis-2-Pentene	11000	Not Detected	31000	Not Detected
trans-2-Pentene	11000	Not Detected	31000	Not Detected
Propylbenzene	11000	Not Detected	54000	Not Detected
2,2,4-Trimethylpentane	11000	10000 J	51000	50000 J
2,3,4-Trimethylpentane	11000	Not Detected	51000	Not Detected
1-Hexene	11000	Not Detected	38000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	11000	Not Detected	54000	Not Detected
4-Ethyltoluene	11000	Not Detected	54000	Not Detected
2-Ethyltoluene	11000	Not Detected	54000	Not Detected
Decane	11000	Not Detected	63000	Not Detected
1,2,3-Trimethylbenzene	11000	Not Detected	54000	Not Detected
1,3-Diethylbenzene	11000	Not Detected	60000	Not Detected
1,4-Diethylbenzene	11000	Not Detected	60000	Not Detected
Undecane	11000	Not Detected	70000	Not Detected
cis-2-Hexene	27000	Not Detected	94000	Not Detected
trans-2-Hexene	27000	Not Detected	94000	Not Detected
alpha-Pinene	27000	Not Detected	150000	Not Detected
beta-Pinene	27000	Not Detected	150000	Not Detected
Cyclopentene	11000	Not Detected	30000	Not Detected
1-Undecene	27000	Not Detected	170000	Not Detected
1-Decene	27000	Not Detected	160000	Not Detected
1-Nonene	11000	Not Detected	56000	Not Detected
1-Octene	11000	Not Detected	50000	Not Detected
1-Heptene	11000	Not Detected	44000	Not Detected
1,3-Butadiene	2700	Not Detected	6000	Not Detected
TPH ref. to Gasoline (MW=100)	54000	700000	220000	2900000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	42	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	103
Ethyl Benzene	103
Styrene	112
Toluene	104
1,2,4-Trimethylbenzene	114
1,3,5-Trimethylbenzene	113
m,p-Xylene	107
o-Xylene	105
Butane	112
1-Butene	102
cis-2-Butene	111
trans-2-butene	114
Cyclohexane	104
Cyclopentane	111
2,2-Dimethylbutane	111
2,3-Dimethylbutane	108
2,3-Dimethylpentane	102
2,4-Dimethylpentane	104
Heptane	103
Hexane	105
Isoprene	113
Cumene	113
Isopentane	114
Methylcyclohexane	101
Methylcyclopentane	100
2-Methylheptane	101
3-Methylheptane	101
2-Methylhexane	105
3-Methylhexane	103
2-Methylpentane	105
3-Methylpentane	105
Isobutane	123
Nonane	106
Octane	101
Pentane	112
1-Pentene	113
cis-2-Pentene	112
trans-2-Pentene	112
Propylbenzene	124
2,2,4-Trimethylpentane	102
2,3,4-Trimethylpentane	99
1-Hexene	106

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

PHOTO	006240	Date of Collection
DATE	1/10/04	Date of Analysis 1/21/04 (EPA)

Compound	%Recovery
3-Ethyltoluene	106
4-Ethyltoluene	138 Q
2-Ethyltoluene	120
Decane	108
1,2,3-Trimethylbenzene	121
1,3-Diethylbenzene	116
1,4-Diethylbenzene	117
Undecane	117
cis-2-Hexene	112
trans-2-Hexene	108
alpha-Pinene	105
beta-Pinene	109
Cyclopentene	110
1-Undecene	102
1-Decene	136
1-Nonene	103
1-Octene	102
1-Heptene	103
1,3-Butadiene	117
TPH ref. to Gasoline (MW=100)	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Page 1 of 1

Contact Person <u>Robin Selby</u>		Project Info:		Turn Around Time:	
Company <u>ERSS Diesel</u>		P.O. # <u>01855093</u>		<input checked="" type="checkbox"/> Normal	
Address <u>City View Blvd</u>		Project Name <u>Horrell</u>		<input type="checkbox"/> Rush <u>Specify</u>	
Phone <u>620-816-1700</u>		FAX <u>620-816-1741</u>		Canister Pressure / Vacuum	
Collected By: Signature <u>Det W B</u>		Analyses Requested <u>ANAL TOXIC SUBSTANCES, METALS, CO2, CO</u>		Initial Final Receipt	
Lab ID	Field Sample I.D.	Date & Time			
01A	MW-3 Grab	6/14/04 0945	-28.0 -3.8 6.0		
Collected By: Signature <u>Robin Selby</u>		Date/Time <u>6/17/04</u>		Notes: <u>Method 7015, 7016, 7017, 7018, 7019, 7020, 7021, 7022, 7023, 7024, 7025, 7026, 7027, 7028, 7029, 7030, 7031, 7032, 7033, 7034, 7035, 7036, 7037, 7038, 7039, 7040, 7041, 7042, 7043, 7044, 7045, 7046, 7047, 7048, 7049, 7050, 7051, 7052, 7053, 7054, 7055, 7056, 7057, 7058, 7059, 7060, 7061, 7062, 7063, 7064, 7065, 7066, 7067, 7068, 7069, 7070, 7071, 7072, 7073, 7074, 7075, 7076, 7077, 7078, 7079, 7080, 7081, 7082, 7083, 7084, 7085, 7086, 7087, 7088, 7089, 7090, 7091, 7092, 7093, 7094, 7095, 7096, 7097, 7098, 7099, 7100, 7101, 7102, 7103, 7104, 7105, 7106, 7107, 7108, 7109, 7110, 7111, 7112, 7113, 7114, 7115, 7116, 7117, 7118, 7119, 7120, 7121, 7122, 7123, 7124, 7125, 7126, 7127, 7128, 7129, 7130, 7131, 7132, 7133, 7134, 7135, 7136, 7137, 7138, 7139, 7140, 7141, 7142, 7143, 7144, 7145, 7146, 7147, 7148, 7149, 7150, 7151, 7152, 7153, 7154, 7155, 7156, 7157, 7158, 7159, 7160, 7161, 7162, 7163, 7164, 7165, 7166, 7167, 7168, 7169, 7170, 7171, 7172, 7173, 7174, 7175, 7176, 7177, 7178, 7179, 7180, 7181, 7182, 7183, 7184, 7185, 7186, 7187, 7188, 7189, 7190, 7191, 7192, 7193, 7194, 7195, 7196, 7197, 7198, 7199, 7200, 7201, 7202, 7203, 7204, 7205, 7206, 7207, 7208, 7209, 7210, 7211, 7212, 7213, 7214, 7215, 7216, 7217, 7218, 7219, 7220, 7221, 7222, 7223, 7224, 7225, 7226, 7227, 7228, 7229, 7230, 7231, 7232, 7233, 7234, 7235, 7236, 7237, 7238, 7239, 7240, 7241, 7242, 7243, 7244, 7245, 7246, 7247, 7248, 7249, 7250, 7251, 7252, 7253, 7254, 7255, 7256, 7257, 7258, 7259, 7260, 7261, 7262, 7263, 7264, 7265, 7266, 7267, 7268, 7269, 7270, 7271, 7272, 7273, 7274, 7275, 7276, 7277, 7278, 7279, 7280, 7281, 7282, 7283, 7284, 7285, 7286, 7287, 7288, 7289, 7290, 7291, 7292, 7293, 7294, 7295, 7296, 7297, 7298, 7299, 7300, 7301, 7302, 7303, 7304, 7305, 7306, 7307, 7308, 7309, 7310, 7311, 7312, 7313, 7314, 7315, 7316, 7317, 7318, 7319, 7320, 7321, 7322, 7323, 7324, 7325, 7326, 7327, 7328, 7329, 7330, 7331, 7332, 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7499, 7500, 7501, 7502, 7503, 7504, 7505, 7506, 7507, 7508, 7509, 7510, 7511, 7512, 7513, 7514, 7515, 7516, 7517, 7518, 7519, 7520, 7521, 7522, 7523, 7524, 7525, 7526, 7527, 7528, 7529, 7530, 7531, 7532, 7533, 7534, 7535, 7536, 7537, 7538, 7539, 7540, 7541, 7542, 7543, 7544, 7545, 7546, 7547, 7548, 7549, 7550, 7551, 7552, 7553, 7554, 7555, 7556, 7557, 7558, 7559, 7560, 7561, 7562, 7563, 7564, 7565, 7566, 7567, 7568, 7569, 7570, 7571, 7572, 7573, 7574, 7575, 7576, 7577, 7578, 7579, 7580, 7581, 7582, 7583, 7584, 7585, 7586, 7587, 7588, 7589, 7590, 7591, 7592, 7593, 7594, 7595, 7596, 7597, 7598, 7599, 7600, 7601, 7602, 7603, 7604, 7605, 7606, 7607, 7608, 7609, 7610, 7611, 7612, 7613, 7614, 7615, 7616, 7617, 7618, 7619, 7620, 7621, 7622, 7623, 7624, 7625, 7626, 7627, 7628, 7629, 7630, 7631, 7632, 7633, 7634, 7635, 7636, 7637, 7638, 7639, 7640, 7641, 7642, 7643, 7644, 7645, 7646, 7647, 7648, 7649, 7650, 7651, 7652, 7653, 7654, 7655, 7656, 7657, 7658, 7659, 7660, 7661, 7662, 7663, 7664, 7665, 7666, 7667, 7668, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7676, 7677, 7678, 7679, 7680, 7681, 7682, 7683, 7684, 7685, 7686, 7687, 7688, 7689, 7690, 7691, 7692, 7693, 7694, 7695, 7696, 7697, 7698, 7699, 7700, 7701, 7702, 7703, 7704, 7705, 7706, 7707, 7708, 7709, 7710, 7711, 7712, 7713, 7714, 7715, 7716, 7717, 7718, 7719, 7720, 7721, 7722, 7723, 7724, 7725, 7726, 7727, 7728, 7729, 7730, 7731, 7732, 7733, 7734, 7735, 7736, 7737, 7738, 7739, 7740, 7741, 7742, 7743, 7744, 7745, 7746, 7747, 7748, 7749, 7750, 7751, 7752, 7753, 7754, 7755, 7756, 7757, 7758, 7759, 7760, 7761, 7762, 7763, 7764, 7765, 7766, 7767, 7768, 7769, 7770, 7771, 7772, 7773, 7774, 7775, 7776, 7777, 7778, 7779, 7780, 7781, 7782, 7783, 7784, 7785, 7786, 7787, 7788, 7789, 7790, 7791, 7792, 7793, 7794, 7795, 7796, 7797, 7798, 7799, 7800, 7801, 7802, 7803, 7804, 7805, 7806, 7807, 7808, 7809, 7810, 7811, 7812, 7813, 7814, 7815, 7816, 7817, 7818, 7819, 7820, 7821, 7822, 7823, 7824, 7825, 7826, 7827, 7828, 7829, 7830, 7831, 7832, 7833, 7834, 7835, 7836, 7837, 7838, 7839, 7840, 7841, 7842, 7843, 7844, 7845, 7846, 7847, 7848, 7849, 7850, 7851, 7852, 7853, 7854, 7855, 7856, 7857, 7858, 7859, 7860, 7861, 7862, 7863, 7864, 7865, 7866, 7867, 7868, 7869, 7870, 7871, 7872, 7873, 7874, 7875, 7876, 7877, 7878, 7879, 7880, 7881, 7882, 7883, 7884, 7885, 7886, 7887, 7888, 7889, 7890, 7891, 7892, 7893, 7894, 7895, 7896, 7897, 7898, 7899, 7900, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908, 7909, 7910, 7911, 7912, 7913, 7914, 7915, 7916, 7917, 7918, 7919, 7920, 7921, 7922, 7923, 7924, 7925, 7926, 7927, 7928, 7929, 7930, 7931, 7932, 7933, 7934, 7935, 7936, 7937, 7938, 7939, 7940, 7941, 7942, 7943, 7944, 7945, 7946, 7947, 7948, 7949, 7950, 7951, 7952, 7953, 7954, 7955, 7956, 7957, 7958, 7959, 7960, 7961, 7962, 7963, 7964, 7965, 7966, 7967, 7968, 7969, 7970, 7971, 7972, 7973, 7974, 7975, 7976, 7977, 7978, 7979, 7980, 7981, 7982, 7983, 7984, 7985, 7986, 7987, 7988, 7989, 7990, 7991, 7992, 7993, 7994, 7995, 7996, 7997, 7998, 7999, 8000, 8001, 8002, 8003, 8004, 8005, 8006, 8007, 8008, 8009, 8010, 8011, 8012, 8013, 8014, 8015, 8016, 8017, 8018, 8019, 8020, 8021, 8022, 8023, 8024, 8025, 8026, 8027, 8028, 8029, 8030, 8031, 8032, 8033, 8034, 8035, 8036, 8037, 8038, 8039, 8040, 8041, 8042, 8043, 8044, 8045, 8046, 8047, 8048, 8049, 8050, 8051, 8052, 8053, 8054, 8055, 8056, 8057, 8058, 8059, 8060, 8061, 8062, 8063, 8064, 8065, 8066, 8067, 8068, 8069, 8070, 8071, 8072, 8073, 8074, 8075, 8076, 8077, 8078, 8079, 8080, 8081, 8082, 8083, 8084, 8085, 8086, 8087, 8088, 8089, 8090, 8091, 8092, 8093, 8094, 8095, 8096, 8097, 8098, 8099, 8100, 8101, 8102, 8103, 8104, 8105, 8106, 8107, 8108, 8109, 8110, 8111, 8112, 8113, 8114, 8115, 8116, 8117, 8118, 8119, 8120, 8121, 8122, 8123, 8124, 8125, 8126, 8127, 8128, 8129, 8130, 8131, 8132, 8133, 8134, 8135, 8136, 8137, 8138, 8139, 8140, 8141, 8142, 8143, 8144, 8145, 8146, 8147, 8148, 8149, 8150, 8151, 8152, 8153, 8154, 8155, 8156, 8157, 8158, 8159, 8160, 8161, 8162, 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8495, 8496, 8497, 8498, 8499, 8500, 8501, 8502, 8503, 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8513, 8514, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8556, 8557, 8558, 8559, 8560, 8561, 8562, 8563, 8564, 8565, 8566, 8567, 8568, 8569, 8570, 8571, 8572, 8573, 8574, 8575, 8576, 8577, 8578, 8579, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590, 8591, 8592, 8593, 8594, 8595, 8596, 8597, 8598, 8599, 8600, 8601, 8602, 8603, 8604, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8621, 8622, 8623, 8624, 8625, 8626, 8627, 8628, 8629, 8630, 8631, 8632, 8633, 8634, 8635, 8636, 8637, 8638, 8639, 8640, 8641, 8642, 8643, 8644, 8645, 8646, 8647, 8648, 8649, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8660, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8680, 8681, 8682, 8683, 8684, 8685, 8686, 8687, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8696, 8697, 8698, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8732, 8733, 8734, 8735, 8736, 8737, 8738, 8739, 8740, 8741, 8742, 8743, 8744, 8745, 8746, 8747, 8748, 8749, 8750, 8751, 8752, 8753, 8754, 8755, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8772, 8773, 8774, 8775, 8776, 8777, 8778, 8779, 8780, 8781, 8782, 8783, 8784, 8785, 8786, 8787, 8788, 8789, 8790, 8791, 8792, 8793, 8794, 8795, 8796, 8797, 8798, 8799, 8800, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 8815, 8816, 8817, 8818, 8819, 8820, 8821, 8822, 8823, 8824, 8825, 8826, 8827, 8828, 8829, 8830, 8831, 8832, 8833, 8834, 8835, 8836, 8837, 8838, 8839, 8840, 8841, 8842, 8843, 8844, 8845, 8846, 8847, 8848, 8849, 8850, 8851, 8852, 8853, 8854, 8855, 8856, 8857, 8858, 8859, 8860, 8861, 8862, 8863, 8864, 8865, 8866, 8867, 8868, 8869, 8870, 8871, 8872, 8873, 8874, 8875, </u>	



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406121AR1

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005093 Hartford ICC

DATE RECEIVED: 6/7/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 7/6/2004

DATE REISSUED: 7/2/04

FRACTION #

NAME

TEST

RECEIPT
VAC/PRES.

01A

MW-3 Grab

Modified TO-15/TICs

6.0 "Hg

02A

Lab Blank

Modified TO-15/TICs

NA

03A

CCV

Modified TO-15/TICs

NA

CERTIFIED BY:

Laboratory Director

DATE: 07/06/04

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406121AR1

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

THE WORK ORDER WAS RE-ISSUED ON 07/06/04 TO CORRECT THE DILUTION FACTOR FOR SAMPLE MW-3 GRAB.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicate as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121AR1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	3400	4200	11000	14000
Ethyl Benzene	3400	Not Detected	15000	Not Detected
Styrene	3400	Not Detected	14000	Not Detected
Toluene	3400	Not Detected	13000	Not Detected
1,2,4-Trimethylbenzene	3400	Not Detected	17000	Not Detected
1,3,5-Trimethylbenzene	3400	Not Detected	17000	Not Detected
m,p-Xylene	3400	Not Detected	15000	Not Detected
o-Xylene	3400	Not Detected	15000	Not Detected
Butane	13000	290000	32000	690000
1-Butene	13000	Not Detected	31000	Not Detected
cis-2-Butene	13000	Not Detected	31000	Not Detected
trans-2-butene	13000	Not Detected	31000	Not Detected
Cyclohexane	13000	13000	47000	46000 J
Cyclopentane	13000	16000	39000	46000
2,2-Dimethylbutane	13000	Not Detected	48000	Not Detected
2,3-Dimethylbutane	13000	28000	48000	99000
2,3-Dimethylpentane	13000	22000	56000	92000
2,4-Dimethylpentane	13000	15000	56000	62000
Heptane	13000	Not Detected	56000	Not Detected
Hexane	13000	40000	48000	140000
Isoprene	13000	Not Detected	38000	Not Detected
Cumene	13000	Not Detected	67000	Not Detected
Isopentane	13000	240000	40000	720000
Methylcyclohexane	13000	Not Detected	55000	Not Detected
Methylcyclopentane	13000	42000	47000	150000
2-Methylheptane	13000	Not Detected	64000	Not Detected
3-Methylheptane	13000	Not Detected	64000	Not Detected
2-Methylhexane	13000	18000	56000	76000
3-Methylhexane	13000	19000	56000	79000
2-Methylpentane	13000	110000	48000	390000
3-Methylpentane	13000	72000	48000	260000
Isobutane	13000	180000	32000	420000
Nonane	13000	Not Detected	72000	Not Detected
Octane	13000	Not Detected	64000	Not Detected
Pentane	13000	170000	40000	510000
1-Pentene	13000	Not Detected	39000	Not Detected
cis-2-Pentene	13000	Not Detected	39000	Not Detected
trans-2-Pentene	13000	Not Detected	39000	Not Detected
Propylbenzene	13000	Not Detected	67000	Not Detected
2,2,4-Trimethylpentane	13000	13000	64000	62000 J
2,3,4-Trimethylpentane	13000	Not Detected	64000	Not Detected
1-Hexene	13000	Not Detected	47000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121AR1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	13000	Not Detected	67000	Not Detected
4-Ethyltoluene	13000	Not Detected	67000	Not Detected
2-Ethyltoluene	13000	Not Detected	67000	Not Detected
Decane	13000	Not Detected	80000	Not Detected
1,2,3-Trimethylbenzene	13000	Not Detected	67000	Not Detected
1,3-Diethylbenzene	13000	Not Detected	75000	Not Detected
1,4-Diethylbenzene	13000	Not Detected	75000	Not Detected
Undecane	13000	Not Detected	87000	Not Detected
cis-2-Hexene	34000	Not Detected	120000	Not Detected
trans-2-Hexene	34000	Not Detected	120000	Not Detected
alpha-Pinene	34000	Not Detected	190000	Not Detected
beta-Pinene	34000	Not Detected	190000	Not Detected
Cyclopentene	13000	Not Detected	38000	Not Detected
1-Undecene	34000	Not Detected	220000	Not Detected
1-Decene	34000	Not Detected	200000	Not Detected
1-Nonene	13000	Not Detected	70000	Not Detected
1-Octene	13000	Not Detected	63000	Not Detected
1-Heptene	13000	Not Detected	55000	Not Detected
1,3-Butadiene	3400	Not Detected	7600	Not Detected
TPH ref. to Gasoline (MW=100)	67000	880000	280000	3600000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121AR1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121AR1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
TPH ref. to Gasoline (MW=100)	10	880000	42	3600000

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121AR1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	103
Ethyl Benzene	103
Styrene	112
Toluene	104
1,2,4-Trimethylbenzene	114
1,3,5-Trimethylbenzene	113
m,p-Xylene	107
o-Xylene	105
Butane	112
1-Butene	102
cis-2-Butene	111
trans-2-butene	114
Cyclohexane	104
Cyclopentane	111
2,2-Dimethylbutane	111
2,3-Dimethylbutane	108
2,3-Dimethylpentane	102
2,4-Dimethylpentane	104
Heptane	103
Hexane	105
Isoprene	113
Cumene	113
Isopentane	114
Methylcyclohexane	101
Methylcyclopentane	100
2-Methylheptane	101
3-Methylheptane	101
2-Methylhexane	105
3-Methylhexane	103
2-Methylpentane	105
3-Methylpentane	105
Isobutane	123
Nonane	106
Octane	101
Pentane	112
1-Pentene	113
cis-2-Pentene	112
trans-2-Pentene	112
Propylbenzene	124
2,2,4-Trimethylpentane	102
2,3,4-Trimethylpentane	99
1-Hexene	106

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121AR1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

5-DIN-10	b062402	Date of Collection
		Date of Analysis

Compound	%Recovery
3-Ethyltoluene	106
4-Ethyltoluene	138 Q
2-Ethyltoluene	120
Decane	108
1,2,3-Trimethylbenzene	121
1,3-Diethylbenzene	116
1,4-Diethylbenzene	117
Undecane	117
cis-2-Hexene	112
trans-2-Hexene	108
alpha-Pinene	105
beta-Pinene	109
Cyclopentene	110
1-Undecene	102
1-Decene	136
1-Nonene	103
1-Octene	102
1-Heptene	103
1,3-Butadiene	117
TPH ref. to Gasoline (MW=100)	Not Spiked

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130



CHAIN-OF-CUSTODY RECORD

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FOLSOM, CA 95630-4719

Page 1 of 1

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406121B

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005093 Hartford ICC

DATE RECEIVED: 6/7/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 6/21/2004

FRACTION #

NAME

TEST

RECEIPT
VAC./PRES.

01A

MW-3 Grab

Modified TO-15

6.0 "Hg

02A

Lab Blank

Modified TO-15

NA

03A

CCV

Modified TO-15

NA

04A

LCS

Modified TO-15

NA

CERTIFIED BY:

Laboratory Director

DATE: 06/21/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406121B

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	6.7	4000	22	13000

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method	GC/MS	Sample Name	Lab Blank
Sample ID	0406121B-02A	Sample Date	06/12/2014

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		88
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406121B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method	GC/MS	Sample Name	LCS
File Name	0406121B-04A	Sample Date	06/12/2004

Compound	%Recovery
Benzene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406121C

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005093 Hartford ICC

DATE RECEIVED: 6/7/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/18/04

FRACTION #

NAME

TEST

**RECEIPT
VAC./PRES.**

01A

MW-3 Grab

Modified ASTM D-1946

6.0 "Hg

02A

Lab Blank

Modified ASTM D-1946

NA

03A

LCS

Modified ASTM D-1946

NA

CERTIFIED BY:

Laboratory Director

DATE: 06/18/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406121C

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane in air using GC/FID. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limit for Methane.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00017	11

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406121C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

0406121C-03A	0406121C-03A	0406121C-03A
0406121C-03A	0406121C-03A	0406121C-03A

Compound	%Recovery
Methane	99

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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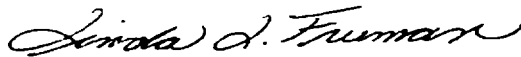
WORK ORDER #: 0406121D

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005093 Hartford ICC
DATE RECEIVED:	6/7/2004	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/11/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MW-3 Grab	Air Toxics Ltd. @ 82	6.0 "Hg
01AA	MW-3 Grab Duplicate	Air Toxics Ltd. @ 82	6.0 "Hg
02A	Lab Blank	Air Toxics Ltd. @ 82	NA
03A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY: _____



Laboratory Director

DATE: 06/11/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406121D

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of up to 40 ml of sample followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

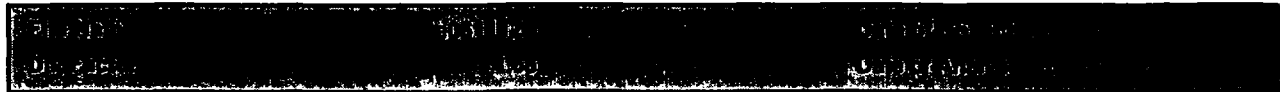
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121D-01A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	84	49000
Ethene	84	Not Detected
Acetylene	84	Not Detected
Propane	84	30000
Propylene	84	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab Duplicate

ID#: 0406121D-01AA

AIT TOXICS LTD. @ 82 GC/FID

0406121D-01AA	0406121D-01AA	0406121D-01AA
0406121D-01AA	0406121D-01AA	0406121D-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	3400	52000
Ethene	3400	Not Detected
Acetylene	3400	Not Detected
Propane	3400	32000
Propylene	3400	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121D-02A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406121D-03A

AIT TOXICS LTD. @ 82 GC/FID

0406121D-03A	0406121D-03A	Date of Collection
0406121D-03A	0406121D-03A	Date of Analysis

Compound	%Recovery
Ethane	105
Ethene	110
Acetylene	117
Propane	97
Propylene	104

Container Type: NA - Not Applicable



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Page 1 of 1

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406121E

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005093 Hartford ICC
DATE RECEIVED:	6/7/2004	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/21/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	MW-3 Grab	Modified TO-15	6.0 "Hg
02A	Lab Blank	Modified TO-15	NA
03A	CCV	Modified TO-15	NA
04A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/21/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406121E

One 6 Liter Summa Canister sample was received on June 07, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	<= 30 %RSD (TO-14A)	<= 30 % RSD with 2 compounds allowed out to <= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

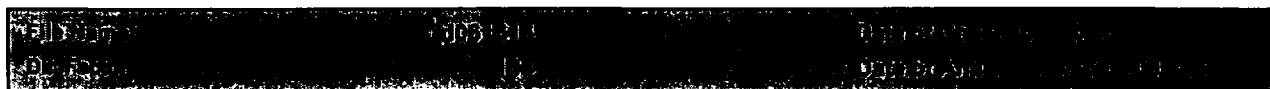
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121E-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	67	Not Detected	340	Not Detected
Freon 114	67	Not Detected	480	Not Detected
Chloromethane	270	Not Detected	560	Not Detected
Vinyl Chloride	67	Not Detected	170	Not Detected
1,3-Butadiene	67	Not Detected	150	Not Detected
Bromomethane	67	Not Detected	260	Not Detected
Chloroethane	67	Not Detected	180	Not Detected
Freon 11	67	Not Detected	380	Not Detected
Ethanol	270	Not Detected	510	Not Detected
Freon 113	67	Not Detected	520	Not Detected
1,1-Dichloroethene	67	Not Detected	270	Not Detected
Acetone	270	Not Detected	650	Not Detected
2-Propanol	270	Not Detected	670	Not Detected
Carbon Disulfide	67	Not Detected	210	Not Detected
3-Chloropropene	270	Not Detected	850	Not Detected
Methylene Chloride	67	Not Detected	240	Not Detected
Methyl tert-butyl ether	67	Not Detected	240	Not Detected
trans-1,2-Dichloroethene	67	Not Detected	270	Not Detected
Hexane	67	32000 E	240	120000 E
Vinyl Acetate	270	Not Detected	960	Not Detected
1,1-Dichloroethane	67	Not Detected	280	Not Detected
2-Butanone (Methyl Ethyl Ketone)	67	Not Detected	200	Not Detected
cis-1,2-Dichloroethene	67	Not Detected	270	Not Detected
Tetrahydrofuran	67	Not Detected	200	Not Detected
Chloroform	67	Not Detected	330	Not Detected
1,1,1-Trichloroethane	67	Not Detected	370	Not Detected
Cyclohexane	67	14000	230	50000
Carbon Tetrachloride	67	Not Detected	430	Not Detected
2,2,4-Trimethylpentane	67	12000	320	57000
Benzene	67	4300	220	14000
1,2-Dichloroethane	67	Not Detected	280	Not Detected
Heptane	67	5200	280	22000
Trichloroethene	67	Not Detected	360	Not Detected
1,2-Dichloropropane	67	Not Detected	310	Not Detected
1,4-Dioxane	270	Not Detected	980	Not Detected
Bromodichloromethane	67	Not Detected	460	Not Detected
cis-1,3-Dichloropropene	67	Not Detected	310	Not Detected
4-Methyl-2-pentanone	67	Not Detected	280	Not Detected
Toluene	67	Not Detected	260	Not Detected
trans-1,3-Dichloropropene	67	Not Detected	310	Not Detected
1,1,2-Trichloroethane	67	Not Detected	370	Not Detected
Tetrachloroethene	67	Not Detected	460	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MW-3 Grab

ID#: 0406121E-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406121E-01A	0406121E-01A	0406121E-01A
0406121E-01A	0406121E-01A	0406121E-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	270	Not Detected	1100	Not Detected
Dibromochloromethane	67	Not Detected	580	Not Detected
1,2-Dibromoethane (EDB)	67	Not Detected	520	Not Detected
Chlorobenzene	67	Not Detected	310	Not Detected
Ethyl Benzene	67	Not Detected	300	Not Detected
m,p-Xylene	67	66 J	300	290 J
o-Xylene	67	Not Detected	300	Not Detected
Styrene	67	Not Detected	290	Not Detected
Bromoform	67	Not Detected	700	Not Detected
Cumene	67	150	330	760
1,1,2,2-Tetrachloroethane	67	Not Detected	470	Not Detected
Propylbenzene	67	270	330	1300
4-Ethyltoluene	67	Not Detected	330	Not Detected
1,3,5-Trimethylbenzene	67	Not Detected	330	Not Detected
1,2,4-Trimethylbenzene	67	Not Detected	330	Not Detected
1,3-Dichlorobenzene	67	Not Detected	410	Not Detected
1,4-Dichlorobenzene	67	Not Detected	410	Not Detected
alpha-Chlorotoluene	67	Not Detected	350	Not Detected
1,2-Dichlorobenzene	67	Not Detected	410	Not Detected
1,2,4-Trichlorobenzene	270	Not Detected	2000	Not Detected
Hexachlorobutadiene	270	Not Detected	2900	Not Detected

E = Exceeds instrument calibration range.

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	120	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121E-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406121E-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

PROJECT	0406121E-02A	DATE	06/12/2014
CLIENT	0406121E-02A	DATE	06/12/2014

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121E-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	105
Freon 114	94
Chloromethane	94
Vinyl Chloride	94
1,3-Butadiene	74
Bromomethane	89
Chloroethane	103
Freon 11	89
Ethanol	80
Freon 113	92
1,1-Dichloroethene	81
Acetone	74
2-Propanol	79
Carbon Disulfide	80
3-Chloropropene	74
Methylene Chloride	85
Methyl tert-butyl ether	90
trans-1,2-Dichloroethene	81
Hexane	80
Vinyl Acetate	85
1,1-Dichloroethane	85
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	85
Tetrahydrofuran	86
Chloroform	94
1,1,1-Trichloroethane	97
Cyclohexane	96
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	91
Benzene	89
1,2-Dichloroethane	96
Heptane	101
Trichloroethene	103
1,2-Dichloropropane	100
1,4-Dioxane	97
Bromodichloromethane	107
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	107
Toluene	100
trans-1,3-Dichloropropene	107
1,1,2-Trichloroethane	105
Tetrachloroethene	117

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406121E-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

APPROVED	DATE	DATE OF COLLECTION
DICTIONARY	FILE	DATE OF ANALYSIS

Compound	%Recovery
2-Hexanone	103
Dibromochloromethane	119
1,2-Dibromoethane (EDB)	111
Chlorobenzene	106
Ethyl Benzene	106
m,p-Xylene	109
o-Xylene	106
Styrene	109
Bromoform	129
Cumene	100
1,1,2,2-Tetrachloroethane	101
Propylbenzene	100
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	100
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	108
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	84
1,2-Dichlorobenzene	104
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406121E-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	108
Freon 114	104
Chloromethane	92
Vinyl Chloride	99
1,3-Butadiene	74
Bromomethane	91
Chloroethane	124
Freon 11	96
Ethanol	87
Freon 113	94
1,1-Dichloroethene	85
Acetone	79
2-Propanol	74
Carbon Disulfide	85
3-Chloropropene	68
Methylene Chloride	82
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	87
Hexane	83
Vinyl Acetate	104
1,1-Dichloroethane	90
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	93
Tetrahydrofuran	96
Chloroform	103
1,1,1-Trichloroethane	114
Cyclohexane	102
Carbon Tetrachloride	117
2,2,4-Trimethylpentane	83
Benzene	104
1,2-Dichloroethane	112
Heptane	103
Trichloroethene	121
1,2-Dichloropropane	119
1,4-Dioxane	109
Bromodichloromethane	111
cis-1,3-Dichloropropene	120
4-Methyl-2-pentanone	118
Toluene	106
trans-1,3-Dichloropropene	128
1,1,2-Trichloroethane	118
Tetrachloroethene	126

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406121E-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	d06180	Date of Collection
Dir		Time/Date/ID: 0406121E-04A

Compound	%Recovery
2-Hexanone	120
Dibromochloromethane	123
1,2-Dibromoethane (EDB)	114
Chlorobenzene	113
Ethyl Benzene	109
m,p-Xylene	109
o-Xylene	103
Styrene	114
Bromoform	116
Cumene	91
1,1,2,2-Tetrachloroethane	107
Propylbenzene	68
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	110
1,4-Dichlorobenzene	106
alpha-Chlorotoluene	109
1,2-Dichlorobenzene	107
1,2,4-Trichlorobenzene	119
Hexachlorobutadiene	121

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	104	70-130

Sample Transportation Notice

AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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APPENDIX C

AIR TOXICS LTD. - LABORATORY REPORT 0406235

Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
6/11/04 Woman's Locker Room	Hartford Community Center. Indoor air sample from women's locker room.	Indoor Air/Grab Tedlar Bag	0406235-01A	Benzene	Mod. TO-15
6/11/04 Sanitary Closet	Hartford Community Center. Indoor air sample from closet in hallway between locker rooms. <i>Closet contains sewer pipe vent stack.</i>	Indoor Air/Grab Tedlar Bag	0406235-02A	Benzene	Mod. TO-15
6/11/04 Kitchen	Hartford Community Center. Indoor air sample from kitchen area	Indoor Air/Grab Tedlar Bag	0406235-03A	Benzene	Mod. TO-15
6/11/04 Boiler Room	Hartford Community Center. Indoor air sample from boiler room.	Indoor Air/Grab Tedlar Bag	0406235-04A	Benzene	Mod. TO-15



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406235

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	6/14/2004	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/15/2004		

FRACTION #

NAME

TEST

RECEIPT
VAC/PRES.

01A	6/11/04 Womans Locker Room	Modified TO-15	Tedlar Bag
02A	6/11/04 Sanitary Closet	Modified TO-15	Tedlar Bag
03A	6/11/04 Kitchen	Modified TO-15	Tedlar Bag
04A	6/11/04 Boiler Room	Modified TO-15	Tedlar Bag
05A	Lab Blank	Modified TO-15	NA
06A	CCV	Modified TO-15	NA
07A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/15/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406235

Four 5 Liter Tedlar Bag samples were received on June 14, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	<= 30 %RSD (TO-14A)	<= 30 % RSD with 2 compounds allowed out to <= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample 6/11/04 Sanitary Closet due to the presence of high level non-target

species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 6/11/04 Womans Locker Room

ID#: 0406235-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	6.9	0.65	22

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: 6/11/04 Sanitary Closet

ID#: 0406235-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.27	9.8	0.86	32

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: 6/11/04 Kitchen

ID#: 0406235-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

REPORT DATE	06/11/04	07/11/04
REPORT TIME	10:00	10:00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	5.8	0.65	19

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 6/11/04 Boiler Room

ID#: 0406235-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

PRINTED	FILED	DATE/TIME
01/04/05	11:04	01/04/05 11:04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	2.2	0.65	7.3

Container Type: 5 Liter Tedlar Bag

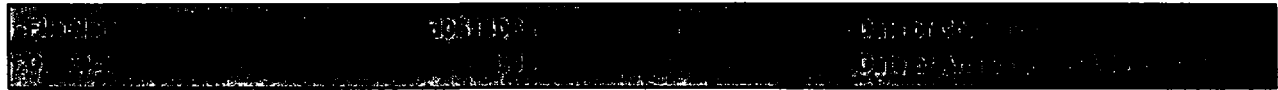
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406235-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406235-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery	
Benzene	91	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406235-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		106
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130



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For 128 rev 04

APPENDIX D

AIR TOXICS LTD. - LABORATORY REPORT 0406241					
Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
134-B E. Watkins	134 E Watkins. Indoor air sample from the basement near bar.	Indoor Air/24-hour Summa Canister	0406241B-01A	Benzene rerun	Mod. TO-15
			0406241C-01A	VOCs	Mod. TO-15
			0406241D-01A	VOCs	Mod. TO-15
			0406241E-01A	Additional VOCs	@ 82 GC/FID
			0406241F-01A	Mod. Natural Gas	ASTM D-1946
134-1 E. Watkins	134 E Watkins. Indoor air sample from 1st floor bedroom at SW corner of house.	Indoor Air/24-hour Summa Canister	0406241B-02A	Benzene rerun	Mod. TO-15
			0406241C-02A	VOCs	Mod. TO-15
			0406241D-02A	VOCs	Mod. TO-15
			0406241E-02A	Additional VOCs	@ 82 GC/FID
			0406241F-02A	Mod. Natural Gas	ASTM D-1946
130-B E. Watkins	130 E Watkins. Indoor air sample from the basement near the back door stairs.	Indoor Air/24-hour Summa Canister	0406241A-03A	Benzene rerun	Mod. TO-15
			0406241C-03A	VOCs	Mod. TO-15
			0406241D-03A	VOCs	Mod. TO-15
			0406241E-03A	Additional VOCs	@ 82 GC/FID
			0406241F-03A	Mod. Natural Gas	ASTM D-1946



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-300 Hartford
DATE RECEIVED:	06/12/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	06/17/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
03A	130-B E. Watkins	Modified TO-15	0 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY: _____

Linda J. Freeman

Laboratory Director

DATE: 06/17/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406241A

One 6 Liter Summa Canister sample was received on June 12, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< RL$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.27	3.0	0.87	9.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406241A	0406241A	0406241A
0406241A	0406241A	0406241A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

[illegible]

Compound	%Recovery
Benzene	84
Container Type: NA - Not Applicable	
Surrogates	%Recovery
Toluene-d8	98
	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		92
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

comparing the samples to other specimens. Relying on the signature on the document indicates that sample is being signed in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collector's handling or shipping of these samples. Requiring a grabber also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Medicine (800) 467-4522

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719

Page 7 of 7

Contact Person <u>Robin Schilling</u>	Project Info:
Company <u>EISS</u>	P.O. # _____
Address <u>27755 Diethl Rd.</u>	Project # <u>01005-073-300</u>
City <u>Warrenville, State IL</u>	Project Name <u>Thudford</u>
Zip <u>60555</u>	
Phone <u>630-836-1700</u>	
FAX <u>630-836-1711</u>	
Collected By: <u>Signal</u> <u>Wade Ellis</u>	

Turn Around Time:
<input checked="" type="checkbox"/> Normal
<input type="checkbox"/> Rush _____
Specify _____
134-B <u>2455</u>
134-1 <u>2625</u>
130-B <u>23670</u>

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (Att. 6)	Canister Pressure / Vacuum Initial	Final	Receipt
00A	134-B E Wastkins	6/8/04-1810	• Petrolum list (Methanol TD-15)	29.5	7.1	6.548
02A	134-1 E Wastkins	6/8/04-1818	as per Quate 040244472	28.0	7.0	7.568
03A	130-B E Wastkins	6/8/04-1823	• Petrolum list (Air Toxic Method 28.0)		0	0.44
			• B2 as per Quate 040244472			
			• Chlorinated Solvents (TD-15)			
			• Methanol (Methanol ASTM-D-1944)			
			as per Quate 040244472			
			• Oxygen			
			• Carbon Dioxide			

Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Date/Time
Held Quoted By: (Signature)	Date/Time	Accepted By: (Signature)	Date/Time
Relinquished By: (Signature)	Date/Time	Accepted By: (Signature)	Date/Time
Shipper Name	Air Bill #	Opened By:	Temp. (°C)
F. Ex	83067744	PAT	
Lab Use Only	5903	Condition	Yes No
		Cocod	(None) 0406241A



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241B

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-300 Hartford

DATE RECEIVED: 06/12/04

CONTACT: DeDe Dodge

DATE COMPLETED: 06/28/04

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	134-B E. Watkins	Modified TO-15	6.5 "Hg
02A	134-1 E. Watkins	Modified TO-15	7.5 "Hg
03A	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406241B

Two 6 Liter Summa Canister samples were received on June 12, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< RL$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

134-B E. Watkins	0406241B-01A	134-B E. Watkins	0406241B-01A
134-B E. Watkins	0406241B-01A	134-B E. Watkins	0406241B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.34	1.1	1.1	3.7

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406241B-02A	0406241B-02A	0406241B-02A
0406241B-02A	0406241B-02A	0406241B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.36	1.1	1.2	3.6

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406241B-03A	0406241B-03A	0406241B-03A	0406241B-03A	0406241B-03A
0406241B-03A	0406241B-03A	0406241B-03A	0406241B-03A	0406241B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		84
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

04/11/2017	04/11/2017	04/11/2017
04/11/2017	04/11/2017	04/11/2017

Compound	%Recovery	
Benzene	92	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any law. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. O.Q.T. Hotline (800) 457-4922

180 BLUE HAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person <u>Robin Sebring</u>		Project Info:		Turn Around Time:	
Company <u>EUSE</u>		P.O. # <u> </u>		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	
Address <u>27755 Ditch Rd.</u> City <u>Whittier</u> State <u>IL</u> Zip <u>60555</u>		Project # <u>2005-003-300</u>		Specify <u> </u>	
Phone <u>630-834-1700</u> FAX <u>630-834-1711</u>		Project Name <u>Hadfield</u>		134-B <u>54 2455</u> 134-1 <u>54 2425</u> 130-B <u>54 2380</u>	
Collected By: Signature <u>Hadfield</u>					
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (<u>Att 2</u>)		Canister Pressure / Vacuum Initial Final
01D	134-B E Whittier	6/18/04-1810	• Petroleum list (Amended TO-15 as per Quate CH200447)		29.5 7.0 6.548
02A	134-1 E Whittier	6/18/04-1818	• Petroleum list (Air Toxics Method 20-0 D CH200447)		28.0 7.0 7.548
03A	130-B E Whittier	6/18/04-1523	• Benzene as per Quate CH200447		
			• Chloroform as per Quate CH200447		
			• Methanol as per Quate CH200447		
			• Oxygen		
			• Carbon Dioxide		
Relinquished By: Signature <u>Hadfield</u> Date/Time <u>1930</u>		Received By: Signature <u> </u> Date/Time <u> </u>		Notes: Request 6 analyses per sample.	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		134-B Sample started 480 1810 and 649 1810	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		134-1 " 418 1818 and 640 1825	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		130-B " 418 1523 and 640 1825	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		This sample was analyzed as per Quate CH200447	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		Condition: <u>Good</u> (Specify Sample Intact? <u>Yes</u>)	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		Custodian: <u>Hadfield</u>	
Relinquished By: Signature <u> </u> Date/Time <u> </u>		Received By: Signature <u> </u> Date/Time <u> </u>		Yes NO None <u>20206241B</u>	



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241C

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-300 Hartford

DATE RECEIVED: 6/12/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 6/25/2004

FRACTION

NAME

TEST

RECEIPT VAC./PRES.

01A	134-B E. Watkins	Modified TO-15	6.5 "Hg
02A	134-1 E. Watkins	Modified TO-15	7.5 "Hg
02AA	134-1 E. Watkins Duplicate	Modified TO-15	7.5 "Hg
03A	130-B E. Watkins	Modified TO-15	0 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/25/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406241C

Three 6 Liter Summa Canister samples were received on June 12, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40% of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	0406241C-01A	DATE/TIME	04/06/2004 10:00:00
ANALYST	0406241C-01A	DATE/TIME	04/06/2004 10:00:00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.86	Not Detected	4.3	Not Detected
Freon 114	0.86	Not Detected	6.1	Not Detected
Chloromethane	3.4	Not Detected	7.2	Not Detected
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
1,3-Butadiene	0.86	Not Detected	1.9	Not Detected
Bromomethane	0.86	Not Detected	3.4	Not Detected
Chloroethane	0.86	Not Detected	2.3	Not Detected
Freon 11	0.86	Not Detected	4.9	Not Detected
Ethanol	3.4	4.7	6.5	9.0
Freon 113	0.86	Not Detected	6.7	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Acetone	3.4	6.4	8.2	16
2-Propanol	3.4	Not Detected	8.5	Not Detected
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
3-Chloropropene	3.4	Not Detected	11	Not Detected
Methylene Chloride	0.86	Not Detected	3.0	Not Detected
Methyl tert-butyl ether	0.86	Not Detected	3.1	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Hexane	0.86	150	3.1	550
Vinyl Acetate	3.4	Not Detected	12	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.86	1.8	2.6	5.5
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.6	Not Detected
Chloroform	0.86	Not Detected	4.2	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Cyclohexane	0.86	31	3.0	110
Carbon Tetrachloride	0.86	Not Detected	5.5	Not Detected
2,2,4-Trimethylpentane	0.86	30	4.0	140
Benzene	0.86	1.2	2.8	3.8
1,2-Dichloroethane	0.86	Not Detected	3.5	Not Detected
Heptane	0.86	13	3.6	53
Trichloroethene	0.86	Not Detected	4.7	Not Detected
1,2-Dichloropropane	0.86	Not Detected	4.0	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.86	Not Detected	5.8	Not Detected
cis-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
4-Methyl-2-pentanone	0.86	Not Detected	3.6	Not Detected
Toluene	0.86	1.8	3.3	7.1
trans-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Tetrachloroethene	0.86	Not Detected	5.9	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.4	Not Detected	14	Not Detected
Dibromochloromethane	0.86	Not Detected	7.4	Not Detected
1,2-Dibromoethane (EDB)	0.86	Not Detected	6.7	Not Detected
Chlorobenzene	0.86	Not Detected	4.0	Not Detected
Ethyl Benzene	0.86	Not Detected	3.8	Not Detected
m,p-Xylene	0.86	Not Detected	3.8	Not Detected
o-Xylene	0.86	Not Detected	3.8	Not Detected
Styrene	0.86	Not Detected	3.7	Not Detected
Bromoform	0.86	Not Detected	9.0	Not Detected
Cumene	0.86	Not Detected	4.3	Not Detected
1,1,2,2-Tetrachloroethane	0.86	Not Detected	6.0	Not Detected
Propylbenzene	0.86	Not Detected	4.3	Not Detected
4-Ethyltoluene	0.86	Not Detected	4.3	Not Detected
1,3,5-Trimethylbenzene	0.86	Not Detected	4.3	Not Detected
1,2,4-Trimethylbenzene	0.86	Not Detected	4.3	Not Detected
1,3-Dichlorobenzene	0.86	Not Detected	5.2	Not Detected
1,4-Dichlorobenzene	0.86	Not Detected	5.2	Not Detected
alpha-Chlorotoluene	0.86	Not Detected	4.5	Not Detected
1,2-Dichlorobenzene	0.86	Not Detected	5.2	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	26	Not Detected
Hexachlorobutadiene	3.4	Not Detected	37	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.90	Not Detected	4.5	Not Detected
Freon 114	0.90	Not Detected	6.4	Not Detected
Chloromethane	3.6	Not Detected	7.5	Not Detected
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
1,3-Butadiene	0.90	Not Detected	2.0	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.90	Not Detected	5.1	Not Detected
Ethanol	3.6	10	6.8	20
Freon 113	0.90	Not Detected	7.0	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Acetone	3.6	6.8	8.6	16
2-Propanol	3.6	Not Detected	8.9	Not Detected
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	3.6	Not Detected	11	Not Detected
Methylene Chloride	0.90	Not Detected	3.2	Not Detected
Methyl tert-butyl ether	0.90	Not Detected	3.3	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Hexane	0.90	29	3.2	100
Vinyl Acetate	3.6	Not Detected	13	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	1.7	2.7	5.2
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.7	Not Detected
Chloroform	0.90	Not Detected	4.4	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	5.0	Not Detected
Cyclohexane	0.90	5.8	3.1	20
Carbon Tetrachloride	0.90	Not Detected	5.7	Not Detected
2,2,4-Trimethylpentane	0.90	6.6	4.2	31
Benzene	0.90	1.2	2.9	4.1
1,2-Dichloroethane	0.90	Not Detected	3.7	Not Detected
Heptane	0.90	2.4	3.7	10
Trichloroethene	0.90	Not Detected	4.9	Not Detected
1,2-Dichloropropane	0.90	Not Detected	4.2	Not Detected
1,4-Dioxane	3.6	Not Detected	13	Not Detected
Bromodichloromethane	0.90	Not Detected	6.1	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected	4.1	Not Detected
4-Methyl-2-pentanone	0.90	Not Detected	3.7	Not Detected
Toluene	0.90	2.6	3.4	10
trans-1,3-Dichloropropene	0.90	Not Detected	4.1	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected	5.0	Not Detected
Tetrachloroethene	0.90	Not Detected	6.2	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.6	Not Detected	15	Not Detected
Dibromochloromethane	0.90	Not Detected	7.7	Not Detected
1,2-Dibromoethane (EDB)	0.90	Not Detected	7.0	Not Detected
Chlorobenzene	0.90	Not Detected	4.2	Not Detected
Ethyl Benzene	0.90	Not Detected	3.9	Not Detected
m,p-Xylene	0.90	Not Detected	4.0	Not Detected
o-Xylene	0.90	Not Detected	4.0	Not Detected
Styrene	0.90	Not Detected	3.9	Not Detected
Bromoform	0.90	Not Detected	9.4	Not Detected
Cumene	0.90	Not Detected	4.5	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected	6.2	Not Detected
Propylbenzene	0.90	Not Detected	4.5	Not Detected
4-Ethyltoluene	0.90	Not Detected	4.5	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected	4.5	Not Detected
1,2,4-Trimethylbenzene	0.90	Not Detected	4.5	Not Detected
1,3-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
alpha-Chlorotoluene	0.90	Not Detected	4.7	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
1,2,4-Trichlorobenzene	3.6	Not Detected	27	Not Detected
Hexachlorobutadiene	3.6	Not Detected	39	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins Duplicate

ID#: 0406241C-02AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.90	Not Detected	4.5	Not Detected
Freon 114	0.90	Not Detected	6.4	Not Detected
Chloromethane	3.6	Not Detected	7.5	Not Detected
Vinyl Chloride	0.90	Not Detected	2.3	Not Detected
1,3-Butadiene	0.90	Not Detected	2.0	Not Detected
Bromomethane	0.90	Not Detected	3.5	Not Detected
Chloroethane	0.90	Not Detected	2.4	Not Detected
Freon 11	0.90	Not Detected	5.1	Not Detected
Ethanol	3.6	9.9	6.8	19
Freon 113	0.90	Not Detected	7.0	Not Detected
1,1-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Acetone	3.6	6.8	8.6	16
2-Propanol	3.6	Not Detected	8.9	Not Detected
Carbon Disulfide	0.90	Not Detected	2.8	Not Detected
3-Chloropropene	3.6	Not Detected	11	Not Detected
Methylene Chloride	0.90	Not Detected	3.2	Not Detected
Methyl tert-butyl ether	0.90	Not Detected	3.3	Not Detected
trans-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Hexane	0.90	29	3.2	100
Vinyl Acetate	3.6	Not Detected	13	Not Detected
1,1-Dichloroethane	0.90	Not Detected	3.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.90	1.7	2.7	5.2
cis-1,2-Dichloroethene	0.90	Not Detected	3.6	Not Detected
Tetrahydrofuran	0.90	Not Detected	2.7	Not Detected
Chloroform	0.90	Not Detected	4.4	Not Detected
1,1,1-Trichloroethane	0.90	Not Detected	5.0	Not Detected
Cyclohexane	0.90	5.7	3.1	20
Carbon Tetrachloride	0.90	Not Detected	5.7	Not Detected
2,2,4-Trimethylpentane	0.90	6.6	4.2	32
Benzene	0.90	1.2	2.9	3.8
1,2-Dichloroethane	0.90	Not Detected	3.7	Not Detected
Heptane	0.90	2.6	3.7	11
Trichloroethene	0.90	Not Detected	4.9	Not Detected
1,2-Dichloropropane	0.90	Not Detected	4.2	Not Detected
1,4-Dioxane	3.6	Not Detected	13	Not Detected
Bromodichloromethane	0.90	Not Detected	6.1	Not Detected
cis-1,3-Dichloropropene	0.90	Not Detected	4.1	Not Detected
4-Methyl-2-pentanone	0.90	Not Detected	3.7	Not Detected
Toluene	0.90	2.7	3.4	10
trans-1,3-Dichloropropene	0.90	Not Detected	4.1	Not Detected
1,1,2-Trichloroethane	0.90	Not Detected	5.0	Not Detected
Tetrachloroethene	0.90	Not Detected	6.2	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins Duplicate

ID#: 0406241C-02AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.6	Not Detected	15	Not Detected
Dibromochloromethane	0.90	Not Detected	7.7	Not Detected
1,2-Dibromoethane (EDB)	0.90	Not Detected	7.0	Not Detected
Chlorobenzene	0.90	Not Detected	4.2	Not Detected
Ethyl Benzene	0.90	Not Detected	3.9	Not Detected
m,p-Xylene	0.90	Not Detected	4.0	Not Detected
o-Xylene	0.90	Not Detected	4.0	Not Detected
Styrene	0.90	Not Detected	3.9	Not Detected
Bromoform	0.90	Not Detected	9.4	Not Detected
Cumene	0.90	Not Detected	4.5	Not Detected
1,1,2,2-Tetrachloroethane	0.90	Not Detected	6.2	Not Detected
Propylbenzene	0.90	Not Detected	4.5	Not Detected
4-Ethyltoluene	0.90	Not Detected	4.5	Not Detected
1,3,5-Trimethylbenzene	0.90	Not Detected	4.5	Not Detected
1,2,4-Trimethylbenzene	0.90	Not Detected	4.5	Not Detected
1,3-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
1,4-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
alpha-Chlorotoluene	0.90	Not Detected	4.7	Not Detected
1,2-Dichlorobenzene	0.90	Not Detected	5.5	Not Detected
1,2,4-Trichlorobenzene	3.6	Not Detected	27	Not Detected
Hexachlorobutadiene	3.6	Not Detected	39	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.67	Not Detected	3.4	Not Detected
Freon 114	0.67	Not Detected	4.8	Not Detected
Chloromethane	2.7	Not Detected	5.6	Not Detected
Vinyl Chloride	0.67	Not Detected	1.7	Not Detected
1,3-Butadiene	0.67	Not Detected	1.5	Not Detected
Bromomethane	0.67	Not Detected	2.6	Not Detected
Chloroethane	0.67	Not Detected	1.8	Not Detected
Freon 11	0.67	Not Detected	3.8	Not Detected
Ethanol	2.7	590 E	5.1	1100 E
Freon 113	0.67	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.67	Not Detected	2.7	Not Detected
Acetone	2.7	74	6.5	180
2-Propanol	2.7	120	6.7	300
Carbon Disulfide	0.67	Not Detected	2.1	Not Detected
3-Chloropropene	2.7	Not Detected	8.5	Not Detected
Methylene Chloride	0.67	Not Detected	2.4	Not Detected
Methyl tert-butyl ether	0.67	Not Detected	2.4	Not Detected
trans-1,2-Dichloroethene	0.67	Not Detected	2.7	Not Detected
Hexane	0.67	180	2.4	640
Vinyl Acetate	2.7	Not Detected	9.6	Not Detected
1,1-Dichloroethane	0.67	Not Detected	2.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.67	4.2	2.0	12
cis-1,2-Dichloroethene	0.67	Not Detected	2.7	Not Detected
Tetrahydrofuran	0.67	Not Detected	2.0	Not Detected
Chloroform	0.67	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.67	Not Detected	3.7	Not Detected
Cyclohexane	0.67	65	2.3	230
Carbon Tetrachloride	0.67	Not Detected	4.3	Not Detected
2,2,4-Trimethylpentane	0.67	94	3.2	450
Benzene	0.67	3.3	2.2	11
1,2-Dichloroethane	0.67	Not Detected	2.8	Not Detected
Heptane	0.67	12	2.8	51
Trichloroethene	0.67	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.67	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.8	Not Detected
Bromodichloromethane	0.67	Not Detected	4.6	Not Detected
cis-1,3-Dichloropropene	0.67	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.67	Not Detected	2.8	Not Detected
Toluene	0.67	5.3	2.6	20
trans-1,3-Dichloropropene	0.67	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.67	Not Detected	3.7	Not Detected
Tetrachloroethene	0.67	0.83	4.6	5.7

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.7	Not Detected	11	Not Detected
Dibromochloromethane	0.67	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.67	Not Detected	5.2	Not Detected
Chlorobenzene	0.67	Not Detected	3.1	Not Detected
Ethyl Benzene	0.67	0.94	3.0	4.1
m,p-Xylene	0.67	2.5	3.0	11
o-Xylene	0.67	0.78	3.0	3.4
Styrene	0.67	0.93	2.9	4.0
Bromoform	0.67	Not Detected	7.0	Not Detected
Cumene	0.67	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.67	Not Detected	4.7	Not Detected
Propylbenzene	0.67	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.67	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.67	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.67	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.67	Not Detected	4.1	Not Detected
1,4-Dichlorobenzene	0.67	0.71	4.1	4.4
alpha-Chlorotoluene	0.67	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.67	Not Detected	4.1	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

1061725	Date of Collection: 11/11/2011
11/11/2011	Date of Analysis: 11/11/2011

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	110
Freon 114	101
Chloromethane	108
Vinyl Chloride	112
1,3-Butadiene	102
Bromomethane	119
Chloroethane	126
Freon 11	104
Ethanol	99
Freon 113	107
1,1-Dichloroethene	104
Acetone	96
2-Propanol	98
Carbon Disulfide	97
3-Chloropropene	104
Methylene Chloride	93
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	105
Hexane	101
Vinyl Acetate	102
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	104
Tetrahydrofuran	102
Chloroform	108
1,1,1-Trichloroethane	110
Cyclohexane	108
Carbon Tetrachloride	112
2,2,4-Trimethylpentane	105
Benzene	97
1,2-Dichloroethane	102
Heptane	106
Trichloroethene	104
1,2-Dichloropropane	101
1,4-Dioxane	98
Bromodichloromethane	110
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	108
Toluene	101
trans-1,3-Dichloropropene	107
1,1,2-Trichloroethane	106
Tetrachloroethene	105

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	101
Dibromochloromethane	116
1,2-Dibromoethane (EDB)	109
Chlorobenzene	104
Ethyl Benzene	106
m,p-Xylene	108
o-Xylene	105
Styrene	113
Bromoform	122
Cumene	109
1,1,2,2-Tetrachloroethane	105
Propylbenzene	111
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	104
1,2,4-Trimethylbenzene	104
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	101
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241C-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	100
Freon 114	101
Chloromethane	89
Vinyl Chloride	104
1,3-Butadiene	97
Bromomethane	119
Chloroethane	108
Freon 11	106
Ethanol	94
Freon 113	101
1,1-Dichloroethene	102
Acetone	97
2-Propanol	86
Carbon Disulfide	99
3-Chloropropene	91
Methylene Chloride	84
Methyl tert-butyl ether	110
trans-1,2-Dichloroethene	105
Hexane	101
Vinyl Acetate	122
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	109
cis-1,2-Dichloroethene	103
Tetrahydrofuran	105
Chloroform	109
1,1,1-Trichloroethane	119
Cyclohexane	108
Carbon Tetrachloride	118
2,2,4-Trimethylpentane	90
Benzene	108
1,2-Dichloroethane	112
Heptane	107
Trichloroethene	114
1,2-Dichloropropane	115
1,4-Dioxane	99
Bromodichloromethane	108
cis-1,3-Dichloropropene	118
4-Methyl-2-pentanone	113
Toluene	103
trans-1,3-Dichloropropene	120
1,1,2-Trichloroethane	112
Tetrachloroethene	107

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241C-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	107
Dibromochloromethane	113
1,2-Dibromoethane (EDB)	106
Chlorobenzene	107
Ethyl Benzene	106
m,p-Xylene	105
o-Xylene	101
Styrene	116
Bromoform	105
Cumene	94
1,1,2,2-Tetrachloroethane	111
Propylbenzene	70
4-Ethyltoluene	103
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	105
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	140 Q
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	120
Hexachlorobutadiene	102

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	97	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project info:		Turn Around Time:		
Company <u>ENSR</u>		P.O. #		<input checked="" type="checkbox"/> Normal		
Address <u>27755 Dickel Rd. City Unionsville State IL Zip 62555</u>		Project # <u>CDWS-183-300</u>		<input type="checkbox"/> Rush		
Phone <u>630-834-1700</u> FAX <u>630-834-1711</u>		Project Name <u>Hartford</u>		Specify		
Collected By: Signature <u>[Signature]</u>				134-B <u>SP 2455</u>		
				134-1 <u>SP 2625</u>		
				130-B <u>SP 23890</u>		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (Per 6)	Canister Pressure / Vacuum Initial	Final	Receipt
OVA	134-B E. Watkins	6/18/04 - 1810	• Petroleum list (Method TO-15)	29.5	7.0	6.5 Hg
O2A	134-1 E. Watkins	6/18/04 - 1818	• as per Route OVA24447	28.0	7.0	7.5 Hg
O3A	130-B E. Watkins	6/18/04 - 1523	• Petroleum list (Air Toxics Method)	28.0	0	0 Hg
			• B2 as per Route OVA24447			
			• Chlorinated Solvents (TO-15)			
			• Methanol (Method ASTM-D-184)			
			• as per route OVA24447			
			• Oxygen			
			• Carbon Dioxide			
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Notes: Request 6 analysis per sample.		
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		134-B Sample started 6/18 at 1810 and 6/19 at 1810		
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		134-1 " " 6/19 at 1818 and 6/19 at 1825		
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		130-B " " 6/18 at 1523 ended?		
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>[Signature]</u> Date/Time <u>6/18/04 1930</u>		this sample was delivered to ENSR Sample		
Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact?	Work Order #
F. Ex	83067744	CH		Good	Yes No	0406241C
Lab Use Only	5903					



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241D

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-300 Hartford

DATE RECEIVED: 6/12/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/04

FRACTION #

NAME

TEST

**RECEIPT
VAC/PRES.**

01A 134-B E. Watkins
02A 134-1 E. Watkins
03A 130-B E. Watkins
04A Lab Blank
05A CCV

Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs

6.5 "Hg
7.5 "Hg
0 "Hg
NA
NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406241D

Three 6 Liter Summa Canister samples were received on June 12, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

The daily calibration standard (CCV) analyzed on 06/24/04 did not meet method required acceptance criteria of 70-130% recovery for 4-Ethyltoluene. Recovery was high and no hits were detected in the associated samples. There was no impact on sample results.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	8.6	Not Detected	28	Not Detected
Ethyl Benzene	8.6	Not Detected	38	Not Detected
Styrene	8.6	Not Detected	37	Not Detected
Toluene	8.6	Not Detected	33	Not Detected
1,2,4-Trimethylbenzene	8.6	Not Detected	43	Not Detected
1,3,5-Trimethylbenzene	8.6	Not Detected	43	Not Detected
m,p-Xylene	8.6	Not Detected	38	Not Detected
o-Xylene	8.6	Not Detected	38	Not Detected
Butane	34	450	83	1100
1-Butene	34	Not Detected	80	Not Detected
cis-2-Butene	34	Not Detected	80	Not Detected
trans-2-butene	34	Not Detected	80	Not Detected
Cyclohexane	34	Not Detected	120	Not Detected
Cyclopentane	34	35	100	100
2,2-Dimethylbutane	34	47	120	170
2,3-Dimethylbutane	34	96	120	340
2,3-Dimethylpentane	34	Not Detected	140	Not Detected
2,4-Dimethylpentane	34	Not Detected	140	Not Detected
Heptane	34	Not Detected	140	Not Detected
Hexane	34	150	120	560
Isoprene	34	Not Detected	97	Not Detected
Cumene	34	Not Detected	170	Not Detected
Isopentane	34	1200	100	3800
Methylcyclohexane	34	Not Detected	140	Not Detected
Methylcyclopentane	34	84	120	300
2-Methylheptane	34	Not Detected	160	Not Detected
3-Methylheptane	34	Not Detected	160	Not Detected
2-Methylhexane	34	36	140	150
3-Methylhexane	34	45	140	190
2-Methylpentane	34	310	120	1100
3-Methylpentane	34	200	120	720
Isobutane	34	140	83	330
Nonane	34	Not Detected	180	Not Detected
Octane	34	Not Detected	160	Not Detected
Pentane	34	670	100	2000
1-Pentene	34	Not Detected	100	Not Detected
cis-2-Pentene	34	Not Detected	100	Not Detected
trans-2-Pentene	34	48	100	140
Propylbenzene	34	Not Detected	170	Not Detected
2,2,4-Trimethylpentane	34	Not Detected	160	Not Detected
2,3,4-Trimethylpentane	34	Not Detected	160	Not Detected
1-Hexene	34	Not Detected	120	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241D-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	34	Not Detected	170	Not Detected
4-Ethyltoluene	34	Not Detected	170	Not Detected
2-Ethyltoluene	34	Not Detected	170	Not Detected
Decane	34	Not Detected	200	Not Detected
1,2,3-Trimethylbenzene	34	Not Detected	170	Not Detected
1,3-Diethylbenzene	34	Not Detected	190	Not Detected
1,4-Diethylbenzene	34	Not Detected	190	Not Detected
Undecane	34	Not Detected	220	Not Detected
cis-2-Hexene	86	Not Detected	300	Not Detected
trans-2-Hexene	86	Not Detected	300	Not Detected
alpha-Pinene	86	Not Detected	480	Not Detected
beta-Pinene	86	Not Detected	480	Not Detected
Cyclopentene	34	Not Detected	97	Not Detected
1-Undecene	86	Not Detected	550	Not Detected
1-Decene	86	Not Detected	500	Not Detected
1-Nonene	34	Not Detected	180	Not Detected
1-Octene	34	Not Detected	160	Not Detected
1-Heptene	34	Not Detected	140	Not Detected
1,3-Butadiene	8.6	Not Detected	19	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241D-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.8	Not Detected	5.8	Not Detected
Ethyl Benzene	1.8	Not Detected	7.9	Not Detected
Styrene	1.8	Not Detected	7.7	Not Detected
Toluene	1.8	2.7	6.8	10
1,2,4-Trimethylbenzene	1.8	Not Detected	8.9	Not Detected
1,3,5-Trimethylbenzene	1.8	Not Detected	8.9	Not Detected
m,p-Xylene	1.8	Not Detected	7.9	Not Detected
o-Xylene	1.8	Not Detected	7.9	Not Detected
Butane	7.2	99	17	240
1-Butene	7.2	Not Detected	17	Not Detected
cis-2-Butene	7.2	Not Detected	17	Not Detected
trans-2-butene	7.2	Not Detected	17	Not Detected
Cyclohexane	7.2	Not Detected	25	Not Detected
Cyclopentane	7.2	Not Detected	21	Not Detected
2,2-Dimethylbutane	7.2	11	26	41
2,3-Dimethylbutane	7.2	22	26	78
2,3-Dimethylpentane	7.2	Not Detected	30	Not Detected
2,4-Dimethylpentane	7.2	Not Detected	30	Not Detected
Heptane	7.2	Not Detected	30	Not Detected
Hexane	7.2	31	26	110
Isoprene	7.2	Not Detected	20	Not Detected
Cumene	7.2	Not Detected	36	Not Detected
Isopentane	7.2	280	21	820
Methylcyclohexane	7.2	Not Detected	29	Not Detected
Methylcyclopentane	7.2	15	25	53
2-Methylheptane	7.2	Not Detected	34	Not Detected
3-Methylheptane	7.2	Not Detected	34	Not Detected
2-Methylhexane	7.2	7.2	30	30
3-Methylhexane	7.2	8.8	30	37
2-Methylpentane	7.2	67	26	240
3-Methylpentane	7.2	42	26	150
Isobutane	7.2	36	17	88
Nonane	7.2	Not Detected	38	Not Detected
Octane	7.2	Not Detected	34	Not Detected
Pentane	7.2	140	21	410
1-Pentene	7.2	Not Detected	21	Not Detected
cis-2-Pentene	7.2	Not Detected	21	Not Detected
trans-2-Pentene	7.2	10	21	30
Propylbenzene	7.2	Not Detected	36	Not Detected
2,2,4-Trimethylpentane	7.2	Not Detected	34	Not Detected
2,3,4-Trimethylpentane	7.2	Not Detected	34	Not Detected
1-Hexene	7.2	Not Detected	25	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241D-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	7.2	Not Detected	36	Not Detected
4-Ethyltoluene	7.2	Not Detected	36	Not Detected
2-Ethyltoluene	7.2	Not Detected	36	Not Detected
Decane	7.2	Not Detected	42	Not Detected
1,2,3-Trimethylbenzene	7.2	Not Detected	36	Not Detected
1,3-Diethylbenzene	7.2	Not Detected	40	Not Detected
1,4-Diethylbenzene	7.2	Not Detected	40	Not Detected
Undecane	7.2	Not Detected	46	Not Detected
cis-2-Hexene	18	Not Detected	62	Not Detected
trans-2-Hexene	18	Not Detected	63	Not Detected
alpha-Pinene	18	Not Detected	100	Not Detected
beta-Pinene	18	Not Detected	100	Not Detected
Cyclopentene	7.2	Not Detected	20	Not Detected
1-Undecene	18	Not Detected	110	Not Detected
1-Decene	18	Not Detected	100	Not Detected
1-Nonene	7.2	Not Detected	38	Not Detected
1-Octene	7.2	Not Detected	33	Not Detected
1-Heptene	7.2	Not Detected	29	Not Detected
1,3-Butadiene	1.8	Not Detected	4.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	19	Not Detected	62	Not Detected
Ethyl Benzene	19	Not Detected	84	Not Detected
Styrene	19	Not Detected	83	Not Detected
Toluene	19	Not Detected	73	Not Detected
1,2,4-Trimethylbenzene	19	Not Detected	96	Not Detected
1,3,5-Trimethylbenzene	19	Not Detected	96	Not Detected
m,p-Xylene	19	Not Detected	84	Not Detected
o-Xylene	19	Not Detected	84	Not Detected
Butane	77	810	180	1900
1-Butene	77	Not Detected	180	Not Detected
cis-2-Butene	77	Not Detected	180	Not Detected
trans-2-butene	77	Not Detected	180	Not Detected
Cyclohexane	77	Not Detected	270	Not Detected
Cyclopentane	77	Not Detected	220	Not Detected
2,2-Dimethylbutane	77	180	270	650
2,3-Dimethylbutane	77	340	270	1200
2,3-Dimethylpentane	77	76 J	320	320
2,4-Dimethylpentane	77	76 J	320	320
Heptane	77	Not Detected	320	Not Detected
Hexane	77	200	270	730
Isoprene	77	Not Detected	220	Not Detected
Cumene	77	Not Detected	380	Not Detected
Isopentane	77	3600	230	11000
Methylcyclohexane	77	Not Detected	310	Not Detected
Methylcyclopentane	77	150	270	510
2-Methylheptane	77	Not Detected	360	Not Detected
3-Methylheptane	77	Not Detected	360	Not Detected
2-Methylhexane	77	76 J	320	320
3-Methylhexane	77	94	320	390
2-Methylpentane	77	840	270	3000
3-Methylpentane	77	520	270	1900
Isobutane	77	420	180	1000
Nonane	77	Not Detected	410	Not Detected
Octane	77	Not Detected	360	Not Detected
Pentane	77	1300	230	3800
1-Pentene	77	Not Detected	220	Not Detected
cis-2-Pentene	77	Not Detected	220	Not Detected
trans-2-Pentene	77	Not Detected	220	Not Detected
Propylbenzene	77	Not Detected	380	Not Detected
2,2,4-Trimethylpentane	77	100	360	500
2,3,4-Trimethylpentane	77	Not Detected	360	Not Detected
1-Hexene	77	Not Detected	270	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	77	Not Detected	380	Not Detected
4-Ethyltoluene	77	Not Detected	380	Not Detected
2-Ethyltoluene	77	Not Detected	380	Not Detected
Decane	77	Not Detected	450	Not Detected
1,2,3-Trimethylbenzene	77	Not Detected	380	Not Detected
1,3-Diethylbenzene	77	Not Detected	430	Not Detected
1,4-Diethylbenzene	77	Not Detected	430	Not Detected
Undecane	77	Not Detected	500	Not Detected
cis-2-Hexene	190	Not Detected	670	Not Detected
trans-2-Hexene	190	Not Detected	670	Not Detected
alpha-Pinene	190	Not Detected	1100	Not Detected
beta-Pinene	190	Not Detected	1100	Not Detected
Cyclopentene	77	Not Detected	220	Not Detected
1-Undecene	190	Not Detected	1200	Not Detected
1-Decene	190	Not Detected	1100	Not Detected
1-Nonene	77	Not Detected	400	Not Detected
1-Octene	77	Not Detected	360	Not Detected
1-Heptene	77	Not Detected	310	Not Detected
1,3-Butadiene	19	Not Detected	43	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406241D-04A	0406241D-04A	0406241D-04A
0406241D-04A	0406241D-04A	0406241D-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Sample ID: 0406241D-04A	Method: TO-15 GC/MS	Report Date: 06/24/2014
-------------------------	---------------------	-------------------------

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	103
Ethyl Benzene	103
Styrene	112
Toluene	104
1,2,4-Trimethylbenzene	114
1,3,5-Trimethylbenzene	113
m,p-Xylene	107
o-Xylene	105
Butane	112
1-Butene	102
cis-2-Butene	111
trans-2-butene	114
Cyclohexane	104
Cyclopentane	111
2,2-Dimethylbutane	111
2,3-Dimethylbutane	108
2,3-Dimethylpentane	102
2,4-Dimethylpentane	104
Heptane	103
Hexane	105
Isoprene	113
Cumene	113
Isopentane	114
Methylcyclohexane	101
Methylcyclopentane	100
2-Methylheptane	101
3-Methylheptane	101
2-Methylhexane	105
3-Methylhexane	103
2-Methylpentane	105
3-Methylpentane	105
Isobutane	123
Nonane	106
Octane	101
Pentane	112
1-Pentene	113
cis-2-Pentene	112
trans-2-Pentene	112
Propylbenzene	124
2,2,4-Trimethylpentane	102
2,3,4-Trimethylpentane	99
1-Hexene	106

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406241D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
3-Ethyltoluene	106
4-Ethyltoluene	138 Q
2-Ethyltoluene	120
Decane	108
1,2,3-Trimethylbenzene	121
1,3-Diethylbenzene	116
1,4-Diethylbenzene	117
Undecane	117
cis-2-Hexene	112
trans-2-Hexene	108
alpha-Pinene	105
beta-Pinene	109
Cyclopentene	110
1-Undecene	102
1-Decene	135
1-Nonene	103
1-Octene	102
1-Heptene	103
1,3-Butadiene	117

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130



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CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project info:		Turn Around Time:		
Company <u>ENSR</u>		P.O. # <u> </u>		<input checked="" type="checkbox"/> Normal		
Address <u>2755 Ditch Rd. City of Vallejo State IL Zip 94588</u>		Project # <u>01005-103-300</u>		<input type="checkbox"/> Rush		
Phone <u>707-836-1700</u> FAX <u>707-836-1711</u>		Project Name <u>Hard Rock</u>		Specify		
Collected By: Signature <u>Mark Schilling</u>				134-B SN 2455		
				134-1 SN 2615		
				130-B SN 23690		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (See 4)	Canister Pressure / Vacuum Initial	Final	Receipt
01A	134-B E. Watkins	6/8/04 - 1810	• Petroleum list (Method TO-15)	29.5	7.0	6/5/04
02A	134-1 E. Watkins	6/8/04 - 1818	• as per Data 04024447	28.0	7.0	7/5/04
03A	130-B E. Watkins	6/8/04 - 1523	• Petroleum list (Air Toxics Method)	28.0	0	0/4/04
			• B2 as per Data 04024447			
			• Chlorinated Solvents (TO-15)			
			• Methanol (Method ASTM D-1946)			
			• as per Data 04024447			
			• Oxygen			
			• Carbon Dioxide			
Reinquished By: (Signature) <u>Mark Schilling</u> Date/Time <u>1930</u>		Received By: (Signature) <u> </u> Date/Time <u> </u>		Notes: Request 6 analyses per sample.		
Reinquished By: (Signature) <u> </u> Date/Time <u> </u>		Received By: (Signature) <u> </u> Date/Time <u> </u>		134-B Sample started 6/8 at 1810 and 6/9 at 1810		
Reinquished By: (Signature) <u> </u> Date/Time <u> </u>		Received By: (Signature) <u> </u> Date/Time <u> </u>		134-1 " " 6/9 at 1818 and 6/10 at 1825		
Reinquished By: (Signature) <u> </u> Date/Time <u> </u>		Received By: (Signature) <u> </u> Date/Time <u> </u>		130-B " " 6/10 at 1523 ended?		
Reinquished By: (Signature) <u> </u> Date/Time <u> </u>		Received By: (Signature) <u> </u> Date/Time <u> </u>		This sample sustained a CSAS Sample		
Shipper Name <u>F. Ex</u> Air Bill # <u>83067744</u> Opened By: <u>MA</u> Temp. (C) <u> </u>		Condition <u>Good</u> Custody Seals Intact? <u>Yes</u> No <u>None</u>		Work Order # <u>04062410</u>		
Lab Use Only						



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241E

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-300 Hartford

DATE RECEIVED: 6/12/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/2004

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	134-B E. Watkins	Air Toxics Ltd. @ 82	6.5 "Hg
02A	134-1 E. Watkins	Air Toxics Ltd. @ 82	7.5 "Hg
03A	130-B E. Watkins	Air Toxics Ltd. @ 82	0.0 "Hg
04A	Lab Blank	Air Toxics Ltd. @ 82	NA
05A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- A1 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406241E

Three 6 Liter Summa Canister samples were received on June 12, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of a 1.0 ml sample through a fixed sampling loop followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241E-01A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	86	Not Detected
Ethene	86	Not Detected
Acetylene	86	Not Detected
Propane	86	Not Detected
Propylene	86	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241E-02A

AIT TOXICS LTD. @ 82 GC/FID

FOUND	20618	DATE/COLE-01/01/01
FILE		DATE/ANALYST-01/01/01

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	90	Not Detected
Ethene	90	Not Detected
Acetylene	90	Not Detected
Propane	90	Not Detected
Propylene	90	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241E-03A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	67	Not Detected
Ethene	67	Not Detected
Acetylene	67	Not Detected
Propane	67	Not Detected
Propylene	67	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241E-04A

AIT TOXICS LTD. @ 82 GC/FID

File Name	206180	Date of Collection
File #	110	Date of Analysis

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241E-05A

AIT TOXICS LTD. @ 82 GC/FID

ALC 101	2016	DATE OF ANALYSIS
10/10/16	10/10/16	DATE OF ANALYSIS

Compound	%Recovery
Ethane	106
Ethene	110
Acetylene	118
Propane	110
Propylene	113

Container Type: NA - Not Applicable



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CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project info: P.O. # _____ Project # <u>02005-183-300</u> Project Name <u>Hanford</u>		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify <u>134-B 74 2455</u> <u>134-1 74 2615</u> <u>130-B 74 23870</u>	
Company <u>EAER</u>		Analyses Requested (<u>Att 6</u>)		Canister Pressure / Vacuum Initial Final Receipt	
Address <u>27755 Diehl Rd. City University State IL Zip 60555</u>		Date & Time		Initial Final Receipt	
Phone <u>630-6134-1711</u> FAX <u>630-634-1711</u>		Field Sample I.D.		Initial Final Receipt	
Collected By: Signature <u>Mark G. Hill</u>		Date & Time		Initial Final Receipt	
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (<u>Att 6</u>)	Canister Pressure / Vacuum Initial Final Receipt	Canister Pressure / Vacuum Initial Final Receipt
01D	134-B E. Watkins	6/18/04 - 1810	• Potassium list (Method TD-15)	29.5	7.0 1546
02A	134-1 E. Watkins	6/18/04 - 1818	as per Quote 040224447	28.0	7.0 7548
03A	130-B E. Watkins	6/18/04 - 1523	• Potassium list (Air Toxics Method)	28.0	0 0046
			• B2 as per Quote 040224447		
			• Chlorinated Solvents (TD-15)		
			• Methanol (Method ASTM-D-1846)		
			as per quote 040224447		
			• Oxygen		
			• Carbon Dioxide		
Received By: Signature <u>Mark G. Hill</u> Date/Time <u>6/18/04 1930</u>		Received By: Signature <u>Mark G. Hill</u> Date/Time <u>6/18/04 1930</u>		Notes: Request 6 analyses per Sample. 134-B Sample started 4/8 @ 1810 and 6/18 @ 1810 134-1 " " 6/18 @ 1818 and 6/18 @ 1815 130-B " " 6/18 @ 1523 and 6/18 @ 1523 This sample contained 6 EAER Sample	
Reinquished By: Signature <u>Mark G. Hill</u> Date/Time <u>6/18/04 1930</u>		Reinquished By: Signature <u>Mark G. Hill</u> Date/Time <u>6/18/04 1930</u>		Work Order #	
Shipper Name <u>F. Ex</u> Air Bill # <u>83067744</u> Opened By: <u>MA</u> Temp. (°C) _____		Condition <u>Good</u> Custody/Seals Intact? <u>Yes</u> No _____		Work Order # <u>0406241E</u>	
Lab Use Only					



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406241F

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-300 Hartford
DATE RECEIVED:	6/12/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/24/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	134-B E. Watkins	Modified ASTM D-1946	6.5 "Hg
02A	134-1 E. Watkins	Modified ASTM D-1946	7.5 "Hg
03A	130-B E. Watkins	Modified ASTM D-1946	0 "Hg
04A	Lab Blank	Modified ASTM D-1946	NA
05A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/24/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406241F

Three 6 Liter Summa Canister samples were received on June 12, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 134-B E. Watkins

ID#: 0406241F-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.17	20
Methane	0.00017	0.00036
Carbon Dioxide	0.017	0.065

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 134-1 E. Watkins

ID#: 0406241F-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	20
Methane	0.00018	0.00030
Carbon Dioxide	0.018	0.056

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 130-B E. Watkins

ID#: 0406241F-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.13	21
Methane	0.00013	0.00036
Carbon Dioxide	0.013	0.095

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406241F-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406241F-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	%Recovery
Oxygen	93
Methane	100
Carbon Dioxide	100

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Sample Transportation Notice

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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project Info:		Turn Around Time:			
Company <u>ENSR</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal			
Address <u>27755 Ditch Rd. City, Utah State II Zip 84055</u>		Project # <u>02005-183-300</u>		<input type="checkbox"/> Rush			
Phone <u>630-836-1700</u> FAX <u>630-836-1711</u>		Project Name <u>Handford</u>		Specify			
Collected By: Signature <u>Robert Enslin</u>				134-B <u>SN 2455</u>			
				134-1 <u>SN 2625</u>			
				130-B <u>SN 25890</u>			
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested (All)	Canister Pressure / Vacuum	Initial	Final	Receipt
01A	134-B E Watkins	6/10/04 - 1810	• Petroleum list (Method TO-15)	28.5	7.0	6.546	
02A	134-1 E Watkins	6/10/04 - 1818	• as per Route 020244477	28.0	7.0	7.546	
03A	130-B E Watkins	6/10/04 - 1523	• Petroleum list (Air Toxics Method)	28.0	0	0.146	
			• c B2 as per Route 020244477				
			• Chlorinated Solvents (TO-15)				
			• Methanol (Method ASTM-D-1946)				
			• as per route 020244477				
			• Oxygen				
			• Carbon Dioxide				
Received By: Signature <u>Robert Enslin</u> Date/Time <u>6/10/04 1930</u>		Notes: Received 6 analyses per sample.					
Reinquished By: Signature <u>Robert Enslin</u> Date/Time _____		134-B Sample checked 4/8 & 1810 and 6/4 & 1810					
Reinquished By: Signature _____ Date/Time _____		134-1 " " 6/8 & 1818 and 6/4 & 1825					
Reinquished By: Signature _____ Date/Time _____		130-B " " 6/8 & 1523 and 6/4 & 1825					
Reinquished By: Signature _____ Date/Time _____		This sample was checked on 6/8/04					
Shipper Name <u>F. Cox</u> Air Bill # <u>23067744</u> Opened By: <u>Bob</u> Temp (°C) _____ Condition <u>Good</u> Cusody Seals Intact? <u>Yes</u> No <u>None</u> Mark Order # <u>0406241F</u>							
Lab Use Only							

APPENDIX E

AIR TOXICS LTD. - LABORATORY REPORT 0406249					
Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
MP-22 Watkins	East Watkins Street monitoring point MP-22.	Soil Vapor/Grab Summa Canister	0406249A-01A	Benzene rerun	Mod. TO-15
			0406249B-01A	VOCs	Mod. TO-15
			0406249C-01A	VOCs	Mod. TO-15
			0406249D-01A	Additional VOCs	@ 82 GC/FID
			0406249E-01A	Mod. Natural Gas	ASTM D-1946
MP-23 Watkins	East Watkins Street monitoring point MP-23.	Soil Vapor/Grab Summa Canister	0406249A-02A	Benzene rerun	Mod. TO-15
			0406249B-02A	VOCs	Mod. TO-15
			0406249C-02A	VOCs	Mod. TO-15
			0406249D-02A	Additional VOCs	@ 82 GC/FID
			0406249E-02A	Mod. Natural Gas	ASTM D-1946



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406249A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	6/14/2004	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/28/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MP-22 Watkins	Modified TO-15	5.0 "Hg
02A	MP-23 Watkins	Modified TO-15	5.0 "Hg
02AA	MP-23 Watkins Duplicate	Modified TO-15	5.0 "Hg
03A	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406249A

Two 6 Liter Summa Canister samples were received on June 14, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< RL$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406249A-01A	0406249A-01A
0406249A-01A	0406249A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	540	160000	1700	510000

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File No:	50618	Date of Collection:	8/1/02
Director:	SEA	Date of Analysis:	8/1/02

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	160	34000	520	110000

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins Duplicate

ID#: 0406249A-02AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	160	34000	520	110000

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	005180	DATE/TIME
FILE	100	DATE/TIME

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: s061801	1.00	DATE OF COLLECTION: 01/13/2011	DATE ANALYZED: 01/13/2011
--------------------	------	--------------------------------	---------------------------

Compound	%Recovery	
Benzene	94	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project Info:		Turn Around Time:		
Company <u>ENSR</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal		
Address <u>27755 Delia Rd City Upland, CA 91786</u>		Project # <u>01005-003-360</u>		<input type="checkbox"/> Rush		
Phone <u>630-836-1700</u> FAX <u>630-836-1711</u>		Project Name <u>Health</u>		Specify <u>MP-22 Can for 9405</u> <u>MP-23 Can for 3002</u>		
Collected By: Signature <u>Math</u> <u>6/20/04</u>		Analyses Requested <u>ALL 6</u>		Canister Pressure / Vacuum		
Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	Initial	Final	Receipt
QA	MP-22 Watkins 6/14/04 1338		• Petroleum list (Method ID-15)	29.5	4"	5.0"Hg 6/15/04
QA	MP-23 Watkins 6/14/04 1350		• as per Quote 04024447	29.5	4"	5.0"Hg
			• Petroleum list (Air Toxics Method)			
			• PCB as per Quote 04024447			
			• Chlorinated Solvents (ID-15)			
			• Methane (Method ASTM-D-1944)			
			• as per quote 04024447			
			• Oxygen			
			• Carbon Dioxide			
Received By: Signature <u>Math</u> <u>6/20/04</u>		Received By: Signature <u>Math</u> <u>6/20/04</u>		Notes: Request 6 analysis per sample		
Relinquished By: Signature _____		Relinquished By: Signature _____		MP-22 Started at 6/11 e 1338 ended 6/12 1422		
Relinquished By: Signature _____		Relinquished By: Signature _____		MP-23 " " 6/11 e 1350 ended 6/12 1434		
Shipper Name <u>FedEx</u>		Air Bill # <u>830677445914</u>		Both have 44 min for time		
Opened By: _____		Temp. (°C) _____		Condition <u>Good</u>		
Custody Seals Intact <u>Yes</u>		Yes No		Work Order # <u>0406249A</u>		
Lab Use Only						



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406249B

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford

DATE RECEIVED: 6/14/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/04

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	MP-22 Watkins	Modified TO-15	5.0 "Hg
02A	MP-23 Watkins	Modified TO-15	5.0 "Hg
03A	Lab Blank	Modified TO-15	NA
03B	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
04B	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA
05B	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406249B

Two 6 Liter Summa Canister samples were received on June 14, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< RL$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The daily calibration standards (CCVs) analyzed on 06/23/04 and 06/24/04 did not meet method required

acceptance criteria of 70-130% recovery for Chloroethane. Recoveries were high and no hits were detected in the associated samples. There was no impact on sample results.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0052830	0052830
3220	3220

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1600	Not Detected	8100	Not Detected
Freon 114	1600	Not Detected	11000	Not Detected
Chloromethane	6400	Not Detected	14000	Not Detected
Vinyl Chloride	1600	Not Detected	4200	Not Detected
1,3-Butadiene	1600	Not Detected	3600	Not Detected
Bromomethane	1600	Not Detected	6400	Not Detected
Chloroethane	1600	Not Detected	4300	Not Detected
Freon 11	1600	Not Detected	9200	Not Detected
Ethanol	6400	Not Detected	12000	Not Detected
Freon 113	1600	Not Detected	12000	Not Detected
1,1-Dichloroethene	1600	Not Detected	6500	Not Detected
Acetone	6400	Not Detected	16000	Not Detected
2-Propanol	6400	Not Detected	16000	Not Detected
Carbon Disulfide	1600	Not Detected	5100	Not Detected
3-Chloropropene	6400	Not Detected	20000	Not Detected
Methylene Chloride	1600	Not Detected	5700	Not Detected
Methyl tert-butyl ether	1600	Not Detected	5900	Not Detected
trans-1,2-Dichloroethene	1600	Not Detected	6500	Not Detected
Hexane	1600	2100000 E	5800	7400000 E
Vinyl Acetate	6400	Not Detected	23000	Not Detected
1,1-Dichloroethane	1600	Not Detected	6600	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1600	Not Detected	4800	Not Detected
cis-1,2-Dichloroethene	1600	Not Detected	6500	Not Detected
Tetrahydrofuran	1600	Not Detected	4800	Not Detected
Chloroform	1600	Not Detected	8000	Not Detected
1,1,1-Trichloroethane	1600	Not Detected	8900	Not Detected
Cyclohexane	1600	330000	5600	1100000
Carbon Tetrachloride	1600	Not Detected	10000	Not Detected
2,2,4-Trimethylpentane	1600	320000	7600	1500000
Benzene	1600	180000	5200	590000
1,2-Dichloroethane	1600	Not Detected	6600	Not Detected
Heptane	1600	310000	6700	1300000
Trichloroethene	1600	Not Detected	8800	Not Detected
1,2-Dichloropropane	1600	Not Detected	7600	Not Detected
1,4-Dioxane	6400	Not Detected	24000	Not Detected
Bromodichloromethane	1600	Not Detected	11000	Not Detected
cis-1,3-Dichloropropene	1600	Not Detected	7400	Not Detected
4-Methyl-2-pentanone	1600	Not Detected	6700	Not Detected
Toluene	1600	47000	6200	180000
trans-1,3-Dichloropropene	1600	Not Detected	7400	Not Detected
1,1,2-Trichloroethane	1600	Not Detected	8900	Not Detected
Tetrachloroethene	1600	Not Detected	11000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0062330	File/Container Name:	0406249B-01A
File Path:	2221	File/Container Path:	0406249B-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	6400	Not Detected	27000	Not Detected
Dibromochloromethane	1600	Not Detected	14000	Not Detected
1,2-Dibromoethane (EDB)	1600	Not Detected	12000	Not Detected
Chlorobenzene	1600	Not Detected	7500	Not Detected
Ethyl Benzene	1600	11000	7100	49000
m,p-Xylene	1600	35000	7100	160000
o-Xylene	1600	7900	7100	35000
Styrene	1600	Not Detected	7000	Not Detected
Bromoform	1600	Not Detected	17000	Not Detected
Cumene	1600	Not Detected	8000	Not Detected
1,1,2,2-Tetrachloroethane	1600	Not Detected	11000	Not Detected
Propylbenzene	1600	1600	8000	8100
4-Ethyltoluene	1600	6000	8000	30000
1,3,5-Trimethylbenzene	1600	1800	8000	8800
1,2,4-Trimethylbenzene	1600	3300	8000	16000
1,3-Dichlorobenzene	1600	Not Detected	9800	Not Detected
1,4-Dichlorobenzene	1600	Not Detected	9800	Not Detected
alpha-Chlorotoluene	1600	Not Detected	8500	Not Detected
1,2-Dichlorobenzene	1600	Not Detected	9800	Not Detected
1,2,4-Trichlorobenzene	6400	Not Detected	48000	Not Detected
Hexachlorobutadiene	6400	Not Detected	70000	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1600	Not Detected	8100	Not Detected
Freon 114	1600	Not Detected	11000	Not Detected
Chloromethane	6400	Not Detected	14000	Not Detected
Vinyl Chloride	1600	Not Detected	4200	Not Detected
1,3-Butadiene	1600	Not Detected	3600	Not Detected
Bromomethane	1600	Not Detected	6400	Not Detected
Chloroethane	1600	Not Detected	4300	Not Detected
Freon 11	1600	Not Detected	9200	Not Detected
Ethanol	6400	Not Detected	12000	Not Detected
Freon 113	1600	Not Detected	12000	Not Detected
1,1-Dichloroethene	1600	Not Detected	6500	Not Detected
Acetone	6400	Not Detected	16000	Not Detected
2-Propanol	6400	Not Detected	16000	Not Detected
Carbon Disulfide	1600	Not Detected	5100	Not Detected
3-Chloropropene	6400	Not Detected	20000	Not Detected
Methylene Chloride	1600	Not Detected	5700	Not Detected
Methyl tert-butyl ether	1600	Not Detected	5900	Not Detected
trans-1,2-Dichloroethene	1600	Not Detected	6500	Not Detected
Hexane	1600	1200000 E	5800	4400000 E
Vinyl Acetate	6400	Not Detected	23000	Not Detected
1,1-Dichloroethane	1600	Not Detected	6600	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1600	Not Detected	4800	Not Detected
cis-1,2-Dichloroethene	1600	Not Detected	6500	Not Detected
Tetrahydrofuran	1600	Not Detected	4800	Not Detected
Chloroform	1600	Not Detected	8000	Not Detected
1,1,1-Trichloroethane	1600	Not Detected	8900	Not Detected
Cyclohexane	1600	230000	5600	810000
Carbon Tetrachloride	1600	Not Detected	10000	Not Detected
2,2,4-Trimethylpentane	1600	200000	7600	980000
Benzene	1600	39000	5200	130000
1,2-Dichloroethane	1600	Not Detected	6600	Not Detected
Heptane	1600	180000	6700	740000
Trichloroethene	1600	Not Detected	8800	Not Detected
1,2-Dichloropropane	1600	Not Detected	7600	Not Detected
1,4-Dioxane	6400	Not Detected	24000	Not Detected
Bromodichloromethane	1600	Not Detected	11000	Not Detected
cis-1,3-Dichloropropene	1600	Not Detected	7400	Not Detected
4-Methyl-2-pentanone	1600	Not Detected	6700	Not Detected
Toluene	1600	11000	6200	43000
trans-1,3-Dichloropropene	1600	Not Detected	7400	Not Detected
1,1,2-Trichloroethane	1600	Not Detected	8900	Not Detected
Tetrachloroethene	1600	Not Detected	11000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

MP-23	0406249B-02A	0406249B-02A
0406249B-02A	3220	0406249B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	6400	Not Detected	27000	Not Detected
Dibromochloromethane	1600	Not Detected	14000	Not Detected
1,2-Dibromoethane (EDB)	1600	Not Detected	12000	Not Detected
Chlorobenzene	1600	Not Detected	7500	Not Detected
Ethyl Benzene	1600	Not Detected	7100	Not Detected
m,p-Xylene	1600	4000	7100	18000
o-Xylene	1600	Not Detected	7100	Not Detected
Styrene	1600	Not Detected	7000	Not Detected
Bromoform	1600	Not Detected	17000	Not Detected
Cumene	1600	Not Detected	8000	Not Detected
1,1,2,2-Tetrachloroethane	1600	Not Detected	11000	Not Detected
Propylbenzene	1600	Not Detected	8000	Not Detected
4-Ethyltoluene	1600	Not Detected	8000	Not Detected
1,3,5-Trimethylbenzene	1600	Not Detected	8000	Not Detected
1,2,4-Trimethylbenzene	1600	Not Detected	8000	Not Detected
1,3-Dichlorobenzene	1600	Not Detected	9800	Not Detected
1,4-Dichlorobenzene	1600	Not Detected	9800	Not Detected
alpha-Chlorotoluene	1600	Not Detected	8500	Not Detected
1,2-Dichlorobenzene	1600	Not Detected	9800	Not Detected
1,2,4-Trichlorobenzene	6400	Not Detected	48000	Not Detected
Hexachlorobutadiene	6400	Not Detected	70000	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

LAB ID: 0406249B-03A	DATE: 06/23/2011	DATE OF COLLECTION: 06/23/2011
PROJECT: 0406249B-03A	DATE OF ANALYSIS: 06/23/2011	DATE OF REPORT: 06/23/2011

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249B-03B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249B-03B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	d062405	Date of Collection	3/20/10
Client	3-00	Date of Analysis	3/20/10

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	113
Freon 114	104
Chloromethane	110
Vinyl Chloride	113
1,3-Butadiene	109
Bromomethane	118
Chloroethane	140 Q
Freon 11	104
Ethanol	108
Freon 113	104
1,1-Dichloroethene	106
Acetone	108
2-Propanol	103
Carbon Disulfide	106
3-Chloropropene	106
Methylene Chloride	101
Methyl tert-butyl ether	118
trans-1,2-Dichloroethene	104
Hexane	108
Vinyl Acetate	112
1,1-Dichloroethane	107
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	99
Tetrahydrofuran	83
Chloroform	103
1,1,1-Trichloroethane	104
Cyclohexane	105
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	105
Benzene	98
1,2-Dichloroethane	103
Heptane	111
Trichloroethene	103
1,2-Dichloropropane	102
1,4-Dioxane	98
Bromodichloromethane	108
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	109
Toluene	101
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	107
Tetrachloroethene	100

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	102
Dibromochloromethane	110
1,2-Dibromoethane (EDB)	106
Chlorobenzene	102
Ethyl Benzene	101
m,p-Xylene	101
o-Xylene	100
Styrene	108
Bromoform	115
Cumene	98
1,1,2,2-Tetrachloroethane	100
Propylbenzene	101
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	99
alpha-Chlorotoluene	99
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	93

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249B-04B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	107
Freon 114	100
Chloromethane	99
Vinyl Chloride	109
1,3-Butadiene	104
Bromomethane	114
Chloroethane	132 Q
Freon 11	101
Ethanol	96
Freon 113	101
1,1-Dichloroethene	101
Acetone	99
2-Propanol	98
Carbon Disulfide	101
3-Chloropropene	103
Methylene Chloride	96
Methyl tert-butyl ether	114
trans-1,2-Dichloroethene	100
Hexane	103
Vinyl Acetate	102
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	100
Tetrahydrofuran	78
Chloroform	100
1,1,1-Trichloroethane	101
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	101
Benzene	97
1,2-Dichloroethane	101
Heptane	107
Trichloroethene	101
1,2-Dichloropropane	97
1,4-Dioxane	98
Bromodichloromethane	106
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	107
Toluene	101
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	103
Tetrachloroethene	96

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249B-04B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406249B-04B	0406249B-04B
0406249B-04B	0406249B-04B

Compound	%Recovery
2-Hexanone	99
Dibromochloromethane	108
1,2-Dibromoethane (EDB)	103
Chlorobenzene	99
Ethyl Benzene	99
m,p-Xylene	98
o-Xylene	99
Styrene	106
Bromoform	112
Cumene	96
1,1,2,2-Tetrachloroethane	97
Propylbenzene	99
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	99
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	94

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	117
Freon 114	102
Chloromethane	129
Vinyl Chloride	116
1,3-Butadiene	107
Bromomethane	118
Chloroethane	155 Q
Freon 11	104
Ethanol	65
Freon 113	104
1,1-Dichloroethene	105
Acetone	111
2-Propanol	112
Carbon Disulfide	111
3-Chloropropene	95
Methylene Chloride	95
Methyl tert-butyl ether	124
trans-1,2-Dichloroethene	109
Hexane	114
Vinyl Acetate	104
1,1-Dichloroethane	111
2-Butanone (Methyl Ethyl Ketone)	139
cis-1,2-Dichloroethene	104
Tetrahydrofuran	88
Chloroform	108
1,1,1-Trichloroethane	111
Cyclohexane	110
Carbon Tetrachloride	110
2,2,4-Trimethylpentane	98
Benzene	111
1,2-Dichloroethane	113
Heptane	118
Trichloroethene	113
1,2-Dichloropropane	118
1,4-Dioxane	107
Bromodichloromethane	115
cis-1,3-Dichloropropene	110
4-Methyl-2-pentanone	123
Toluene	114
trans-1,3-Dichloropropene	113
1,1,2-Trichloroethane	116
Tetrachloroethene	108

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	119
Dibromochloromethane	117
1,2-Dibromoethane (EDB)	117
Chlorobenzene	108
Ethyl Benzene	109
m,p-Xylene	109
o-Xylene	103
Styrene	112
Bromoform	122
Cumene	70
1,1,2,2-Tetrachloroethane	106
Propylbenzene	78
4-Ethyltoluene	111
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	115
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	103
Hexachlorobutadiene	107

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	96	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249B-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Freon 12	104
Freon 114	101
Chloromethane	108
Vinyl Chloride	107
1,3-Butadiene	108
Bromomethane	115
Chloroethane	137 Q
Freon 11	103
Ethanol	62
Freon 113	103
1,1-Dichloroethene	105
Acetone	111
2-Propanol	113
Carbon Disulfide	113
3-Chloropropene	97
Methylene Chloride	96
Methyl tert-butyl ether	130
trans-1,2-Dichloroethene	109
Hexane	113
Vinyl Acetate	103
1,1-Dichloroethane	110
2-Butanone (Methyl Ethyl Ketone)	117
cis-1,2-Dichloroethene	102
Tetrahydrofuran	88
Chloroform	107
1,1,1-Trichloroethane	108
Cyclohexane	110
Carbon Tetrachloride	109
2,2,4-Trimethylpentane	96
Benzene	107
1,2-Dichloroethane	107
Heptane	113
Trichloroethene	108
1,2-Dichloropropane	113
1,4-Dioxane	102
Bromodichloromethane	111
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	120
Toluene	109
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	113
Tetrachloroethene	103

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249B-05B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	d062409	Date of Collection	8/24/04 09:05 AM
Detector	1.0	Date of Analysis	8/24/04 09:05 AM

Compound	%Recovery
2-Hexanone	119
Dibromochloromethane	111
1,2-Dibromoethane (EDB)	114
Chlorobenzene	106
Ethyl Benzene	107
m,p-Xylene	107
o-Xylene	101
Styrene	112
Bromoform	120
Cumene	70
1,1,2,2-Tetrachloroethane	106
Propylbenzene	78
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	115
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	100

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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(916) 985-1000 FAX: (916) 985-1020

Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project info:		Turn Around Time:	
Company <u>ENSR</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal	
Address <u>27755 Diehl Rd City University State IL Zip 60555</u>		Project # <u>01005-019-320</u>		<input type="checkbox"/> Rush	
Phone <u>630-836-1700</u> FAX <u>630-836-1711</u>		Project Name <u>Asbestos</u>		Specify	
Collected By: Signature <u>Mark G. L. Schilling</u>				MP-22 Can # 9485	
				MP-23 Can # 3082	
Lab. ID	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	Receipt
CIA	MP-22 Watkins	6/16/94 1338	• Petroleum list (Modified TD-15)	Initial Final	24
CAA	MP-23 Watkins	6/16/94 1350	• as per quote DW024417	29.5 4"	6/17
			• Petroleum list (Air Toxic Method)	29.5 4"	
			• RPA as per quote DW024417		
			• Chlorinated Solvents (TD-15)		
			• Methane (Method ASTM-D-1944)		
			• as per quote DW024417		
			• Oxygen		
			• Carbon Dioxide		
Received By: Signature <u>Mark G. L. Schilling</u> Date/Time <u>6/16/94 1625</u>		Notes: Request 6 analysis per sample			
Received By: Signature <u>James An</u> Date/Time <u>6/16/94 1625</u>		MP-22 Started at 6/16 1338 ended 6/16 1422			
Received By: Signature <u>James An</u> Date/Time <u>6/16/94 1625</u>		MP-23 " 6/16 1350 ended 6/16 1434			
Received By: Signature <u>James An</u> Date/Time <u>6/16/94 1625</u>		Both have 44 min for time			
Shipped Name: <u>RedEx</u> Air Bill # <u>830677415914</u> for <u>—</u>		Condition: <u>Good</u>		Work Order # <u>04062408</u>	
Shipped Name: <u>RedEx</u> Air Bill # <u>830677415914</u> for <u>—</u>		Condition: <u>Good</u>		Work Order # <u>04062408</u>	



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406249C

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford

DATE RECEIVED: 6/14/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/04

FRACTION

NAME

TEST

RECEIPT YAC/PRES.

01A

MP-22 Watkins

Modified TO-15/TICs

5.0 "Hg

02A

MP-23 Watkins

Modified TO-15/TICs

5.0 "Hg

03A

Lab Blank

Modified TO-15/TICs

NA

04A

CCV

Modified TO-15/TICs

NA

CERTIFIED BY:

DATE: 06/28/04

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406249C

Two 6 Liter Summa Canister samples were received on June 14, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates

as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

ALTM	606270	Date of Collection
DN	10700	Date of Analysis

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	54000	150000	170000	480000
Ethyl Benzene	54000	Not Detected	240000	Not Detected
Styrene	54000	Not Detected	230000	Not Detected
Toluene	54000	Not Detected	200000	Not Detected
1,2,4-Trimethylbenzene	54000	Not Detected	270000	Not Detected
1,3,5-Trimethylbenzene	54000	Not Detected	270000	Not Detected
m,p-Xylene	54000	Not Detected	240000	Not Detected
o-Xylene	54000	Not Detected	240000	Not Detected
Butane	210000	5100000	520000	12000000
1-Butene	210000	Not Detected	500000	Not Detected
cis-2-Butene	210000	Not Detected	500000	Not Detected
trans-2-butene	210000	410000	500000	970000
Cyclohexane	210000	250000	750000	880000
Cyclopentane	210000	340000	620000	990000
2,2-Dimethylbutane	210000	260000	770000	940000
2,3-Dimethylbutane	210000	650000	770000	2300000
2,3-Dimethylpentane	210000	330000	890000	1400000
2,4-Dimethylpentane	210000	250000	890000	1000000
Heptane	210000	280000	890000	1100000
Hexane	210000	1400000	770000	5200000
Isoprene	210000	Not Detected	610000	Not Detected
Cumene	210000	Not Detected	1100000	Not Detected
Isopentane	210000	9400000	640000	28000000
Methylcyclohexane	210000	Not Detected	870000	Not Detected
Methylcyclopentane	210000	780000	750000	2700000
2-Methylheptane	210000	Not Detected	1000000	Not Detected
3-Methylheptane	210000	Not Detected	1000000	Not Detected
2-Methylhexane	210000	410000	890000	1700000
3-Methylhexane	210000	460000	890000	1900000
2-Methylpentane	210000	2300000	770000	8200000
3-Methylpentane	210000	1400000	770000	5000000
Isobutane	210000	1600000	520000	3900000
Nonane	210000	Not Detected	1100000	Not Detected
Octane	210000	Not Detected	1000000	Not Detected
Pentane	210000	5100000	640000	15000000
1-Pentene	210000	Not Detected	620000	Not Detected
cis-2-Pentene	210000	Not Detected	620000	Not Detected
trans-2-Pentene	210000	460000	620000	1300000
Propylbenzene	210000	Not Detected	1100000	Not Detected
2,2,4-Trimethylpentane	210000	300000	1000000	1400000
2,3,4-Trimethylpentane	210000	Not Detected	1000000	Not Detected
1-Hexene	210000	Not Detected	750000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

606270	Date of Collection: 07/10
10700	Date of Analysis: 02-21-12

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	210000	Not Detected	1100000	Not Detected
4-Ethyltoluene	210000	Not Detected	1100000	Not Detected
2-Ethyltoluene	210000	Not Detected	1100000	Not Detected
Decane	210000	Not Detected	1300000	Not Detected
1,2,3-Trimethylbenzene	210000	Not Detected	1100000	Not Detected
1,3-Diethylbenzene	210000	Not Detected	1200000	Not Detected
1,4-Diethylbenzene	210000	Not Detected	1200000	Not Detected
Undecane	210000	Not Detected	1400000	Not Detected
cis-2-Hexene	540000	Not Detected	1900000	Not Detected
trans-2-Hexene	540000	Not Detected	1900000	Not Detected
alpha-Pinene	540000	Not Detected	3000000	Not Detected
beta-Pinene	540000	Not Detected	3000000	Not Detected
Cyclopentene	210000	Not Detected	610000	Not Detected
1-Undecene	540000	Not Detected	3400000	Not Detected
1-Decene	540000	Not Detected	3100000	Not Detected
1-Nonene	210000	Not Detected	1100000	Not Detected
1-Octene	210000	Not Detected	1000000	Not Detected
1-Heptene	210000	Not Detected	870000	Not Detected
1,3-Butadiene	54000	Not Detected	120000	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	45000	Not Detected	140000	Not Detected
Ethyl Benzene	45000	Not Detected	200000	Not Detected
Styrene	45000	Not Detected	190000	Not Detected
Toluene	45000	Not Detected	170000	Not Detected
1,2,4-Trimethylbenzene	45000	Not Detected	220000	Not Detected
1,3,5-Trimethylbenzene	45000	Not Detected	220000	Not Detected
m,p-Xylene	45000	Not Detected	200000	Not Detected
o-Xylene	45000	Not Detected	200000	Not Detected
Butane	180000	4200000	430000	10000000
1-Butene	180000	Not Detected	420000	Not Detected
cis-2-Butene	180000	Not Detected	420000	Not Detected
trans-2-butene	180000	330000	420000	770000
Cyclohexane	180000	Not Detected	620000	Not Detected
Cyclopentane	180000	230000	520000	670000
2,2-Dimethylbutane	180000	200000	640000	730000
2,3-Dimethylbutane	180000	460000	640000	1600000
2,3-Dimethylpentane	180000	200000	740000	850000
2,4-Dimethylpentane	180000	Not Detected	740000	Not Detected
Heptane	180000	Not Detected	740000	Not Detected
Hexane	180000	920000	640000	3300000
Isoprene	180000	Not Detected	510000	Not Detected
Cumene	180000	Not Detected	890000	Not Detected
Isopentane	180000	6900000	540000	21000000
Methylcyclohexane	180000	Not Detected	730000	Not Detected
Methylcyclopentane	180000	500000	620000	1700000
2-Methylheptane	180000	Not Detected	850000	Not Detected
3-Methylheptane	180000	Not Detected	850000	Not Detected
2-Methylhexane	180000	260000	740000	1100000
3-Methylhexane	180000	310000	740000	1300000
2-Methylpentane	180000	1600000	640000	5900000
3-Methylpentane	180000	1000000	640000	3700000
Isobutane	180000	1700000	430000	4000000
Nonane	180000	Not Detected	950000	Not Detected
Octane	180000	Not Detected	850000	Not Detected
Pentane	180000	3400000	540000	10000000
1-Pentene	180000	Not Detected	520000	Not Detected
cis-2-Pentene	180000	Not Detected	520000	Not Detected
trans-2-Pentene	180000	290000	520000	860000
Propylbenzene	180000	Not Detected	890000	Not Detected
2,2,4-Trimethylpentane	180000	190000	850000	900000
2,3,4-Trimethylpentane	180000	Not Detected	850000	Not Detected
1-Hexene	180000	Not Detected	620000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406249C-02A	0406249C-02A	0406249C-02A
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Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	180000	Not Detected	890000	Not Detected
4-Ethyltoluene	180000	Not Detected	890000	Not Detected
2-Ethyltoluene	180000	Not Detected	890000	Not Detected
Decane	180000	Not Detected	1000000	Not Detected
1,2,3-Trimethylbenzene	180000	Not Detected	890000	Not Detected
1,3-Diethylbenzene	180000	Not Detected	1000000	Not Detected
1,4-Diethylbenzene	180000	Not Detected	1000000	Not Detected
Undecane	180000	Not Detected	1200000	Not Detected
cis-2-Hexene	450000	Not Detected	1600000	Not Detected
trans-2-Hexene	450000	Not Detected	1600000	Not Detected
alpha-Pinene	450000	Not Detected	2500000	Not Detected
beta-Pinene	450000	Not Detected	2500000	Not Detected
Cyclopentene	180000	Not Detected	510000	Not Detected
1-Undecene	450000	Not Detected	2900000	Not Detected
1-Decene	450000	Not Detected	2600000	Not Detected
1-Nonene	180000	Not Detected	940000	Not Detected
1-Octene	180000	Not Detected	830000	Not Detected
1-Heptene	180000	Not Detected	730000	Not Detected
1,3-Butadiene	45000	Not Detected	100000	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	95
Ethyl Benzene	98
Styrene	99
Toluene	96
1,2,4-Trimethylbenzene	105
1,3,5-Trimethylbenzene	105
m,p-Xylene	97
o-Xylene	97
Butane	101
1-Butene	92
cis-2-Butene	103
trans-2-butene	106
Cyclohexane	99
Cyclopentane	96
2,2-Dimethylbutane	100
2,3-Dimethylbutane	95
2,3-Dimethylpentane	100
2,4-Dimethylpentane	100
Heptane	96
Hexane	90
Isoprene	103
Cumene	106
Isopentane	99
Methylcyclohexane	99
Methylcyclopentane	92
2-Methylheptane	95
3-Methylheptane	97
2-Methylhexane	99
3-Methylhexane	98
2-Methylpentane	91
3-Methylpentane	91
Isobutane	108
Nonane	97
Octane	93
Pentane	96
1-Pentene	101
cis-2-Pentene	100
trans-2-Pentene	101
Propylbenzene	115
2,2,4-Trimethylpentane	96
2,3,4-Trimethylpentane	95
1-Hexene	93

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406249C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 0406249C-04A	0406249C-04A	0406249C-04A
0406249C-04A	0406249C-04A	0406249C-04A

Compound	%Recovery
3-Ethyltoluene	115
4-Ethyltoluene	108
2-Ethyltoluene	110
Decane	97
1,2,3-Trimethylbenzene	109
1,3-Diethylbenzene	105
1,4-Diethylbenzene	105
Undecane	103
cis-2-Hexene	87
trans-2-Hexene	85
alpha-Pinene	88
beta-Pinene	100
Cyclopentene	96
1-Undecene	61
1-Decene	102
1-Nonene	89
1-Octene	92
1-Heptene	91
1,3-Butadiene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



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CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project info:		Turn Around Time:	
Company <u>EXX</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal	
Address <u>27755 Diehl Rd City of Vallejo, State of CA 94592</u>		Project # <u>0405-003-360</u>		<input type="checkbox"/> Rush _____	
Phone <u>630-836-1700</u> FAX <u>630-836-1711</u>		Project Name <u>Heated</u>		Specify _____	
Collected By: Signature <u>Mark C. Lutz</u>		Analyses Requested <u>Ac-6</u>		MP-22 Can 90 9425 MP-23 Can 90 5002	
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	Receipt
QVA	MP-22 Watkins	6/14/94 1338	Petroleum list (Method TO-15)	Initial Final	5-0"Hg 6/15
QVA	MP-23 Watkins	6/14/94 1350	as per Route 0402-4417	29.5 4"	5-0"Hg
			Petroleum list (Air Toxic Method)		
			0.03 cc per Breake 0402-4417		
			Chlorinated Solvents (TO-15)		
			Methane (Method ASTM-D-1944)		
			as per Route 0402-4417		
			Oxygen		
			Carbon Dioxide		
Received By: (Signature) <u>Mark C. Lutz</u> Date/Time <u>6/14/94</u>		Notes: Request 6 analyses per sample			
Requested By: (Signature) <u>James B. Jones</u> Date/Time <u>6/14/94</u>		MP-22 Started at 6:11 & 1338 ended 6:11 & 1425			
Reinstated By: (Signature) _____ Date/Time _____		MP-23 " " 6:11 & 1350 ended 6:11 & 1434			
Shipped By: (Signature) _____ Date/Time _____		Entry have 44 min per time			
Shipper Name <u>EXX</u> Air Bill # <u>830677445814</u> Opened By: _____ Temp. (°C) _____		Condition <u>Good</u>		Custody Seals Intact: _____	
Lab Use Only		Yes No		Work Order # <u>04062490</u>	



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406249D

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	6/14/2004	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/28/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	MP-22 Watkins	Air Toxics Ltd. @ 82	5.0 "Hg
02A	MP-23 Watkins	Air Toxics Ltd. @ 82	5.0 "Hg
03A	Lab Blank	Air Toxics Ltd. @ 82	NA
04A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- A1 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Air Toxics Ltd @ 82
ENSR
Workorder# 0406249D

Two 6 Liter Summa Canister samples were received on June 14, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of up to 40 mL of sample followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249D-01A

AIT TOXICS LTD. @ 82 GC/FID

FILE NAME	0406249D-01A	DATE/TIME	04/06/2004 13:00
ID# FOR	0406249D-01A	DATE/TIME	04/06/2004 13:00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	80	38000
Ethene	80	2300
Acetylene	80	Not Detected
Propane	80	85000
Propylene	80	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249D-02A

AIT TOXICS LTD. @ 82 GC/FID

ANALYST	15052005	01052005-001
LABORATORY	AIT	15052005-001

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	80	37000
Ethene	80	1800
Acetylene	80	Not Detected
Propane	80	120000
Propylene	80	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249D-03A

AIT TOXICS LTD. @ 82 GC/FID

File Name	062005	Date of Collection
File Path	100	06/20/2005 - 07/01/2005

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249D-04A

AIT TOXICS LTD. @ 82 GC/FID



Compound	%Recovery
Ethane	101
Ethene	106
Acetylene	104
Propane	93
Propylene	102

Container Type: NA - Not Applicable



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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project Info:		Turn Around Time:	
Company <u>EAES</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal	
Address <u>27255 Diehl Rd City of Berkeley, CA 94625</u>		Project # <u>0105-013-302</u>		<input type="checkbox"/> Rush	
Phone <u>630-834-1700</u> FAX <u>630-834-1711</u>		Project Name <u>Hand</u>		Specify	
Collected By: Signature <u>Martin G. Loh</u>				MP-22 Can # 9455	
				MP-23 Can # 3082	
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
Q1A	MP-22 Watkins	6/10/94 1338	Petroleum list (Modified ID-15)	Initial Final	5.0"Hg
Q2A	MP-23 Watkins	6/10/94 1350	as per Route ID-24417	29.5 4"	5.0"Hg
			Petroleum list (Air Toxics Method)		
			as per Route ID-24417		
			Chlorinated Solvents (ID-15)		
			Methane (Method A5-ED-19-94)		
			as per Route ID-24417		
			Oxygen		
			Carbon Dioxide		
Received By: Signature <u>Martin G. Loh</u> Date/Time <u>6/10/94 1625</u>		Notes: Request 6 analysis per sample			
Requished By: Signature <u>James M. GYS</u> Date/Time <u>6/10/94</u>		MP-22 Sampled at 6/10/94 ended 6/10/94			
Requished By: Signature <u>James M. GYS</u> Date/Time <u>6/10/94</u>		MP-23 Sampled at 6/10/94 ended 6/10/94			
Shipped By: Signature <u>James M. GYS</u> Date/Time <u>6/10/94</u>		Both have not air in time			
Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody Seals Intact
EAES	830677445914	for	—	Good	Yes No
Lab Use Only					Work Order #
					0406249D



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406249E

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	6/14/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/24/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	MP-22 Watkins	Modified ASTM D-1946	5.0 "Hg
02A	MP-23 Watkins	Modified ASTM D-1946	5.0 "Hg
03A	Lab Blank	Modified ASTM D-1946	NA
04A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/24/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406249E

Two 6 Liter Summa Canister samples were received on June 14, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: MP-22 Watkins

ID#: 0406249E-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	1.2
Methane	0.00016	0.67
Carbon Dioxide	0.016	15

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: MP-23 Watkins

ID#: 0406249E-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	1.3
Methane	0.00016	0.49
Carbon Dioxide	0.016	17

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406249E-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406249E-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	%Recovery
Oxygen	92
Methane	100
Carbon Dioxide	100

Container Type: NA - Not Applicable



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Page 1 of 1

Contact Person <u>Robin Schilling</u>		Project Info:		Turn Around Time:	
Company <u>ELSR</u>		P.O. # _____		<input checked="" type="checkbox"/> Normal	
Address <u>27255 Diehl Rd City, CA 95554</u>		Project # <u>01005-083-360</u>		<input type="checkbox"/> Rush	
Phone <u>630-836-1700</u> FAX <u>630-836-1711</u>		Project Name <u>Asbestos</u>		Specify <u>MP-22 Can 40 PMS</u> <u>MP-23 Can 40 SCS</u>	
Collected By: Signature <u>Math E. L. 2002</u>		Analyses Requested <u>Asbestos</u>		Canister Pressure / Vacuum	
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Initial	Final
<u>QA</u>	<u>MP-22 Watkins</u>	<u>July 13 1998</u>	<u>Petroleum list (Modified TO-15)</u>	<u>29.5</u>	<u>4"</u>
<u>QA</u>	<u>MP-23 Watkins</u>	<u>July 13 1998</u>	<u>as per Asbestos (TO-15)</u>	<u>29.5</u>	<u>4"</u>
			<u>Petroleum list (Asbestos Method)</u>		
			<u>as per Asbestos (TO-15)</u>		
			<u>Chlorinated Solvents (TO-15)</u>		
			<u>Methane (Methane ASTM-D-1948)</u>		
			<u>as per Asbestos (TO-15)</u>		
			<u>Oxygen</u>		
			<u>Carbon Dioxide</u>		
Received By: (Signature) <u>Math E. L. 2002</u> Date/Time <u>July 13 1998</u>		Notes: <u>Request 6 analyses per sample</u>			
Relinquished By: (Signature) <u>Math E. L. 2002</u> Date/Time <u>July 13 1998</u>		<u>MP-22 Started at 6:11 & 1:35 ended 6:11 & 1:35</u>			
Relinquished By: (Signature) <u>Math E. L. 2002</u> Date/Time <u>July 13 1998</u>		<u>MP-23 Started at 6:11 & 1:35 ended 6:11 & 1:35</u>			
Relinquished By: (Signature) <u>Math E. L. 2002</u> Date/Time <u>July 13 1998</u>		<u>Both have 40 min. in Air Toxics</u>			
Shipper Name <u>ELSR</u> Air Bill # <u>830677445914</u> Temp. (°C) <u>---</u>		Condition <u>Good</u> Custody Seals Intact? <u>Yes</u> No <u>None</u>		Work Order # <u>0406249</u>	
Lab Use Only					

APPENDIX F

AIR TOXICS LTD. - LABORATORY REPORT 0406283					
Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
061504-130BNE Corner	130 E Watkins. Indoor air sample near NE corner of basement.	Indoor Air/30-minute Summa Canister	0406283A-01A	Benzene	Mod. TO-15
061504-130B-SW Corner	130 E Watkins. Indoor air sample near SW corner of basement.	Indoor Air/30-minute Summa Canister	0406283A-02A	Benzene	Mod. TO-15
061504-130B- Inside Basement Floor Drain	130 E Watkins. Indoor air sample adjacent to floor drain in basement.	Indoor Air/ 30-minute Summa Canister	0406283B-03A	Benzene rerun	Mod. TO-15
			0406283C-03A	VOCs	Mod. TO-15
			0406283E-03A	Additional VOCs	@ 82 GC/FID
			0406283F-03A	Mod. Natural Gas	ASTM D-1946
061504-130O- outside Eastside	130 E Watkins. Outside of east side of house	Outdoor Air/30-minute Summa Canister	0406283B-04A	Benzene rerun	Mod. TO-15
			0406283C-04A	VOCs	Mod. TO-15
			0406283D-04A	VOCs	Mod. TO-15
			0406283E-04A	Additional VOCs	@ 82 GC/FID
			0406283F-04A	Mod. Natural Gas	ASTM D-1946



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406283A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	06/16/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	06/28/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	061504-130BNE Corner	Modified TO-15	Tedlar Bag
02A	061504-130B-SW Corner	Modified TO-15	Tedlar Bag
03A	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406283A

Two 1 Liter Tedlar Bag samples were received on June 16, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< RL$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130BNE Corner

ID#: 0406283A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	3.1	0.65	10

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-SW Corner

ID#: 0406283A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

061504-130B-SW Corner	0406283A-02A	0406283A-02A
0406283A-02A	0406283A-02A	0406283A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	2.9	0.65	9.4

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

ANALYST: J. J. J.	DATE: 10/10/2010	TIME: 10:10:10
LAB: 1010	INSTR: 1010	FILE: 1010

Compound	%Recovery	
Benzene	84	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		92
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



Sample Transportation Notice

Relinquishing Signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling, shipping of these samples. Relinquishing signature is a sole release agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind related to the collection, handling, or shipping of samples. D.C.T. Medline (800) 467-4522

Page 1 of 1

Contact Person Robert Schallig
Company Enza Corp
Address 27755 Blvd City Chula Vista State CA Zip 92015
Phone 619-326-1200 FAX 619-326-1741
Collected By: & graduate Self

Project info:
P.O. # _____
Project # 01005-073-360
Project Name Handbook

Turn Around Time:
☒ Normal
☐ Rush _____
Specify _____

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure	Vacuum
				Initial	Final
	061504-13012 - inst. & field ^{inst. & field} long term	6/15/04 1535-1424	added 100% methanol 0.82 methanol Chloroform 0.0001	-29.8	-3.1
	061504-13010 inst. & field ^{inst. & field} long term	6/15/04 1635-1709	" "	-28.4	-2.9
	061504-13008 inst. & field ^{inst. & field} long term	6/15/04 1542	Pentane only		6.00
02A	061504-13013 - inst. & field ^{inst. & field} long term	6/15/04 1548	Pentane only		6.00

[illegible][illegible]

Lead Use Only	Shipper Name	Air Bill #	Opened By:	Temp. (°C)	Condition	Custody/Seals Intact?	Work Order #
	Fedex	830674445925	MW	—	good	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> None <input type="checkbox"/>	0406283A

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406283B

Two 6 Liter Summa Canister samples were received on June 16, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-Inside Basement Floor Drain

ID#: 0406283B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.30	3.3	0.97	10

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-Outside Eastside

ID#: 0406283B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

061504-1300-Outside Eastside	0406283B-04A	061504-1300-Outside Eastside	0406283B-04A
------------------------------	--------------	------------------------------	--------------

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.35	0.57	1.1	1.8

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method:	TO-15	Sample:	Lab Blank
Instrument:	Agilent 6890N	Location:	Lab
Operator:	John Doe	Client:	ABC Company

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

APPROVED	REVISED	DATE
04/17/2014	04/17/2014	04/17/2014
04/17/2014	04/17/2014	04/17/2014

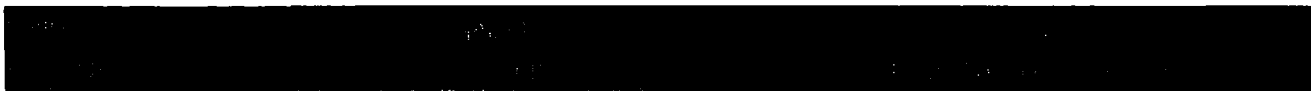
Compound		%Recovery
Benzene		88
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		94
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130



Sample Transportation Notice

By signing a signature on this document, it indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Acknowledging signature is a sole release agreement to release, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling or, or shipping of samples. D.O.T. hotline: (800) 467-4922

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Page 1 of 1

Form: 1500 rev 01



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406283C

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	06/16/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	06/28/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
03A	061504-130B-inside basement floor drain	Modified TO-15	3.0 "Hg
04A	061504-130O-outside Eastside	Modified TO-15	7.0 "Hg
05A	Lab Blank	Modified TO-15	NA
06A	CCV	Modified TO-15	NA
07A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406283C

Two 6 Liter Summa Canister samples were received on June 16, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
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Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The daily calibration standard (CCV) analyzed on 06-24-04 did not meet method required acceptance criteria of 70-130% recovery for Chloroethane. Recovery was high and no hits were detected in the associated samples. There was no impact on sample results.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	7.4	Not Detected	37	Not Detected
Freon 114	7.4	Not Detected	53	Not Detected
Chloromethane	30	Not Detected	62	Not Detected
Vinyl Chloride	7.4	Not Detected	19	Not Detected
1,3-Butadiene	7.4	Not Detected	17	Not Detected
Bromomethane	7.4	Not Detected	29	Not Detected
Chloroethane	7.4	Not Detected	20	Not Detected
Freon 11	7.4	Not Detected	42	Not Detected
Ethanol	30	3400 E	57	6600 E
Freon 113	7.4	Not Detected	58	Not Detected
1,1-Dichloroethene	7.4	Not Detected	30	Not Detected
Acetone	30	41	72	98
2-Propanol	30	59	74	150
Carbon Disulfide	7.4	Not Detected	24	Not Detected
3-Chloropropene	30	Not Detected	95	Not Detected
Methylene Chloride	7.4	Not Detected	26	Not Detected
Methyl tert-butyl ether	7.4	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.4	Not Detected	30	Not Detected
Hexane	7.4	12	27	43
Vinyl Acetate	30	Not Detected	110	Not Detected
1,1-Dichloroethane	7.4	Not Detected	31	Not Detected
2-Butanone (Methyl Ethyl Ketone)	7.4	Not Detected	22	Not Detected
cis-1,2-Dichloroethene	7.4	Not Detected	30	Not Detected
Tetrahydrofuran	7.4	Not Detected	22	Not Detected
Chloroform	7.4	Not Detected	37	Not Detected
1,1,1-Trichloroethane	7.4	Not Detected	41	Not Detected
Cyclohexane	7.4	Not Detected	26	Not Detected
Carbon Tetrachloride	7.4	Not Detected	48	Not Detected
2,2,4-Trimethylpentane	7.4	7.6	35	36
Benzene	7.4	Not Detected	24	Not Detected
1,2-Dichloroethane	7.4	Not Detected	31	Not Detected
Heptane	7.4	Not Detected	31	Not Detected
Trichloroethene	7.4	Not Detected	41	Not Detected
1,2-Dichloropropane	7.4	Not Detected	35	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.4	Not Detected	51	Not Detected
cis-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
4-Methyl-2-pentanone	7.4	Not Detected	31	Not Detected
Toluene	7.4	Not Detected	28	Not Detected
trans-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.4	Not Detected	41	Not Detected
Tetrachloroethene	7.4	Not Detected	51	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

061504-130B-inside basement floor drain	0406283C-03A	061504-130B-inside basement floor drain	0406283C-03A
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Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	30	Not Detected	120	Not Detected
Dibromochloromethane	7.4	Not Detected	64	Not Detected
1,2-Dibromoethane (EDB)	7.4	Not Detected	58	Not Detected
Chlorobenzene	7.4	Not Detected	35	Not Detected
Ethyl Benzene	7.4	Not Detected	33	Not Detected
m,p-Xylene	7.4	Not Detected	33	Not Detected
o-Xylene	7.4	Not Detected	33	Not Detected
Styrene	7.4	Not Detected	32	Not Detected
Bromoform	7.4	Not Detected	78	Not Detected
Cumene	7.4	Not Detected	37	Not Detected
1,1,2,2-Tetrachloroethane	7.4	Not Detected	52	Not Detected
Propylbenzene	7.4	Not Detected	37	Not Detected
4-Ethyltoluene	7.4	Not Detected	37	Not Detected
1,3,5-Trimethylbenzene	7.4	Not Detected	37	Not Detected
1,2,4-Trimethylbenzene	7.4	Not Detected	37	Not Detected
1,3-Dichlorobenzene	7.4	Not Detected	46	Not Detected
1,4-Dichlorobenzene	7.4	Not Detected	46	Not Detected
alpha-Chlorotoluene	7.4	Not Detected	39	Not Detected
1,2-Dichlorobenzene	7.4	Not Detected	46	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-outside Eastside

ID#: 0406283C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.88	Not Detected	4.4	Not Detected
Freon 114	0.88	Not Detected	6.2	Not Detected
Chloromethane	3.5	Not Detected	7.3	Not Detected
Vinyl Chloride	0.88	Not Detected	2.3	Not Detected
1,3-Butadiene	0.88	Not Detected	2.0	Not Detected
Bromomethane	0.88	Not Detected	3.4	Not Detected
Chloroethane	0.88	Not Detected	2.3	Not Detected
Freon 11	0.88	Not Detected	5.0	Not Detected
Ethanol	3.5	4.0	6.7	7.6
Freon 113	0.88	Not Detected	6.8	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Acetone	3.5	Not Detected	8.4	Not Detected
2-Propanol	3.5	Not Detected	8.7	Not Detected
Carbon Disulfide	0.88	Not Detected	2.8	Not Detected
3-Chloropropene	3.5	Not Detected	11	Not Detected
Methylene Chloride	0.88	Not Detected	3.1	Not Detected
Methyl tert-butyl ether	0.88	Not Detected	3.2	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Hexane	0.88	Not Detected	3.1	Not Detected
Vinyl Acetate	3.5	Not Detected	12	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.88	Not Detected	2.6	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.88	Not Detected	4.3	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Cyclohexane	0.88	Not Detected	3.1	Not Detected
Carbon Tetrachloride	0.88	Not Detected	5.6	Not Detected
2,2,4-Trimethylpentane	0.88	Not Detected	4.2	Not Detected
Benzene	0.88	Not Detected	2.8	Not Detected
1,2-Dichloroethane	0.88	Not Detected	3.6	Not Detected
Heptane	0.88	Not Detected	3.6	Not Detected
Trichloroethene	0.88	Not Detected	4.8	Not Detected
1,2-Dichloropropane	0.88	Not Detected	4.1	Not Detected
1,4-Dioxane	3.5	Not Detected	13	Not Detected
Bromodichloromethane	0.88	Not Detected	6.0	Not Detected
cis-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected
4-Methyl-2-pentanone	0.88	Not Detected	3.6	Not Detected
Toluene	0.88	Not Detected	3.4	Not Detected
trans-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected
1,1,2-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Tetrachloroethene	0.88	3.2	6.0	22

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-outside Eastside

ID#: 0406283C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.5	Not Detected	14	Not Detected
Dibromochloromethane	0.88	Not Detected	7.6	Not Detected
1,2-Dibromoethane (EDB)	0.88	Not Detected	6.8	Not Detected
Chlorobenzene	0.88	Not Detected	4.1	Not Detected
Ethyl Benzene	0.88	Not Detected	3.9	Not Detected
m,p-Xylene	0.88	Not Detected	3.9	Not Detected
o-Xylene	0.88	Not Detected	3.9	Not Detected
Styrene	0.88	Not Detected	3.8	Not Detected
Bromoform	0.88	Not Detected	9.2	Not Detected
Cumene	0.88	Not Detected	4.4	Not Detected
1,1,2,2-Tetrachloroethane	0.88	Not Detected	6.1	Not Detected
Propylbenzene	0.88	Not Detected	4.4	Not Detected
4-Ethyltoluene	0.88	Not Detected	4.4	Not Detected
1,3,5-Trimethylbenzene	0.88	Not Detected	4.4	Not Detected
1,2,4-Trimethylbenzene	0.88	Not Detected	4.4	Not Detected
1,3-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
1,4-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
alpha-Chlorotoluene	0.88	Not Detected	4.6	Not Detected
1,2-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
1,2,4-Trichlorobenzene	3.5	Not Detected	26	Not Detected
Hexachlorobutadiene	3.5	Not Detected	38	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

04/11/2016	04/11/2016	04/11/2016	04/11/2016	04/11/2016
04/11/2016	04/11/2016	04/11/2016	04/11/2016	04/11/2016

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Method:	TO-15	Sample ID:	0406283C-05A
Lab:	AIR TOXICS LTD.	Client:	XXXXXX

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283C-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

11/15/2011	0406283C-06A	0406283C-06A
11/15/2011	0406283C-06A	0406283C-06A

Compound	%Recovery
Freon 12	107
Freon 114	100
Chloromethane	99
Vinyl Chloride	109
1,3-Butadiene	104
Bromomethane	114
Chloroethane	132 Q
Freon 11	101
Ethanol	96
Freon 113	101
1,1-Dichloroethene	101
Acetone	99
2-Propanol	98
Carbon Disulfide	101
3-Chloropropene	103
Methylene Chloride	96
Methyl tert-butyl ether	114
trans-1,2-Dichloroethene	100
Hexane	103
Vinyl Acetate	102
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	100
Tetrahydrofuran	78
Chloroform	100
1,1,1-Trichloroethane	101
Cyclohexane	102
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	101
Benzene	97
1,2-Dichloroethane	101
Heptane	107
Trichloroethene	101
1,2-Dichloropropane	97
1,4-Dioxane	98
Bromodichloromethane	106
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	107
Toluene	101
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	103
Tetrachloroethene	96

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283C-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406283C-06A	0406283C-06A	0406283C-06A
0406283C-06A	0406283C-06A	0406283C-06A

Compound	%Recovery
2-Hexanone	99
Dibromochloromethane	108
1,2-Dibromoethane (EDB)	103
Chlorobenzene	99
Ethyl Benzene	99
m,p-Xylene	98
o-Xylene	99
Styrene	106
Bromoform	112
Cumene	96
1,1,2,2-Tetrachloroethane	97
Propylbenzene	99
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	96
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	99
1,2-Dichlorobenzene	94
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	94

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283C-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Analysis	0406283C-07A	04/06/2008
Sample Name	LCS	04/06/2008

Compound	%Recovery
Freon 12	104
Freon 114	101
Chloromethane	108
Vinyl Chloride	107
1,3-Butadiene	108
Bromomethane	115
Chloroethane	137 Q
Freon 11	103
Ethanol	62
Freon 113	103
1,1-Dichloroethene	105
Acetone	111
2-Propanol	113
Carbon Disulfide	113
3-Chloropropene	97
Methylene Chloride	96
Methyl tert-butyl ether	130
trans-1,2-Dichloroethene	109
Hexane	113
Vinyl Acetate	103
1,1-Dichloroethane	110
2-Butanone (Methyl Ethyl Ketone)	117
cis-1,2-Dichloroethene	102
Tetrahydrofuran	88
Chloroform	107
1,1,1-Trichloroethane	108
Cyclohexane	110
Carbon Tetrachloride	109
2,2,4-Trimethylpentane	96
Benzene	107
1,2-Dichloroethane	107
Heptane	113
Trichloroethene	108
1,2-Dichloropropane	113
1,4-Dioxane	102
Bromodichloromethane	111
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	120
Toluene	109
trans-1,3-Dichloropropene	110
1,1,2-Trichloroethane	113
Tetrachloroethene	103

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283C-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

10/10/2014	10/10/2014	10/10/2014	10/10/2014
10/10/2014	10/10/2014	10/10/2014	10/10/2014

Compound	%Recovery
2-Hexanone	119
Dibromochloromethane	111
1,2-Dibromoethane (EDB)	114
Chlorobenzene	106
Ethyl Benzene	107
m,p-Xylene	107
o-Xylene	101
Styrene	112
Bromoform	120
Cumene	70
1,1,2,2-Tetrachloroethane	106
Propylbenzene	78
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	97
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	96
alpha-Chlorotoluene	115
1,2-Dichlorobenzene	92
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	100

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130

Sample Transportation Notice

AIR TOXICS LTD

CHAIN-OF-CUSTODY RECORD

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

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AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406283D

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford

DATE RECEIVED: 6/16/04

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/04

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
03A	061504-130B-inside basement floor drain	Modified TO-15/TICs	3.0 "Hg
04A	061504-130O-outside Eastside	Modified TO-15/TICs	7.0 "Hg
05A	Lab Blank	Modified TO-15/TICs	NA
06A	CCV	Modified TO-15/TICs	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406283D

Two 6 Liter Summa Canister samples were received on June 16, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over 1CAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	3.7	Not Detected	12	Not Detected
Ethyl Benzene	3.7	Not Detected	16	Not Detected
Styrene	3.7	Not Detected	16	Not Detected
Toluene	3.7	5.4	14	20
1,2,4-Trimethylbenzene	3.7	Not Detected	19	Not Detected
1,3,5-Trimethylbenzene	3.7	Not Detected	19	Not Detected
m,p-Xylene	3.7	Not Detected	16	Not Detected
o-Xylene	3.7	Not Detected	16	Not Detected
Butane	15	55	36	130
1-Butene	15	Not Detected	35	Not Detected
cis-2-Butene	15	Not Detected	35	Not Detected
trans-2-butene	15	Not Detected	35	Not Detected
Cyclohexane	15	Not Detected	52	Not Detected
Cyclopentane	15	Not Detected	43	Not Detected
2,2-Dimethylbutane	15	Not Detected	53	Not Detected
2,3-Dimethylbutane	15	16	53	56
2,3-Dimethylpentane	15	Not Detected	62	Not Detected
2,4-Dimethylpentane	15	Not Detected	62	Not Detected
Heptane	15	Not Detected	62	Not Detected
Hexane	15	Not Detected	53	Not Detected
Isoprene	15	18	42	51
Cumene	15	Not Detected	74	Not Detected
Isopentane	15	180	45	560
Methylcyclohexane	15	Not Detected	61	Not Detected
Methylcyclopentane	15	Not Detected	52	Not Detected
2-Methylheptane	15	Not Detected	71	Not Detected
3-Methylheptane	15	Not Detected	71	Not Detected
2-Methylhexane	15	Not Detected	62	Not Detected
3-Methylhexane	15	Not Detected	62	Not Detected
2-Methylpentane	15	42	53	150
3-Methylpentane	15	26	53	94
Isobutane	15	610	36	1500
Nonane	15	Not Detected	79	Not Detected
Octane	15	Not Detected	71	Not Detected
Pentane	15	72	45	220
1-Pentene	15	Not Detected	43	Not Detected
cis-2-Pentene	15	Not Detected	43	Not Detected
trans-2-Pentene	15	Not Detected	43	Not Detected
Propylbenzene	15	Not Detected	74	Not Detected
2,2,4-Trimethylpentane	15	Not Detected	71	Not Detected
2,3,4-Trimethylpentane	15	Not Detected	71	Not Detected
1-Hexene	15	Not Detected	52	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283D-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	15	Not Detected	74	Not Detected
4-Ethyltoluene	15	Not Detected	74	Not Detected
2-Ethyltoluene	15	Not Detected	74	Not Detected
Decane	15	Not Detected	88	Not Detected
1,2,3-Trimethylbenzene	15	Not Detected	74	Not Detected
1,3-Diethylbenzene	15	Not Detected	83	Not Detected
1,4-Diethylbenzene	15	Not Detected	83	Not Detected
Undecane	15	Not Detected	97	Not Detected
cis-2-Hexene	37	Not Detected	130	Not Detected
trans-2-Hexene	37	Not Detected	130	Not Detected
alpha-Pinene	37	Not Detected	210	Not Detected
beta-Pinene	37	Not Detected	210	Not Detected
Cyclopentene	15	Not Detected	42	Not Detected
1-Undecene	37	Not Detected	240	Not Detected
1-Decene	37	Not Detected	220	Not Detected
1-Nonene	15	Not Detected	78	Not Detected
1-Octene	15	Not Detected	70	Not Detected
1-Heptene	15	Not Detected	61	Not Detected
1,3-Butadiene	3.7	Not Detected	8.4	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-outside Eastside

ID#: 0406283D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.88	Not Detected	2.8	Not Detected
Ethyl Benzene	0.88	Not Detected	3.9	Not Detected
Styrene	0.88	Not Detected	3.8	Not Detected
Toluene	0.88	Not Detected	3.4	Not Detected
1,2,4-Trimethylbenzene	0.88	Not Detected	4.4	Not Detected
1,3,5-Trimethylbenzene	0.88	Not Detected	4.4	Not Detected
m,p-Xylene	0.88	Not Detected	3.9	Not Detected
o-Xylene	0.88	Not Detected	3.9	Not Detected
Butane	3.5	5.0	8.4	12
1-Butene	3.5	Not Detected	8.2	Not Detected
cis-2-Butene	3.5	Not Detected	8.2	Not Detected
trans-2-butene	3.5	Not Detected	8.2	Not Detected
Cyclohexane	3.5	Not Detected	12	Not Detected
Cyclopentane	3.5	Not Detected	10	Not Detected
2,2-Dimethylbutane	3.5	Not Detected	12	Not Detected
2,3-Dimethylbutane	3.5	Not Detected	12	Not Detected
2,3-Dimethylpentane	3.5	Not Detected	14	Not Detected
2,4-Dimethylpentane	3.5	Not Detected	14	Not Detected
Heptane	3.5	Not Detected	14	Not Detected
Hexane	3.5	Not Detected	12	Not Detected
Isoprene	3.5	Not Detected	9.9	Not Detected
Cumene	3.5	Not Detected	17	Not Detected
Isopentane	3.5	5.4	10	16
Methylcyclohexane	3.5	Not Detected	14	Not Detected
Methylcyclopentane	3.5	Not Detected	12	Not Detected
2-Methylheptane	3.5	Not Detected	17	Not Detected
3-Methylheptane	3.5	Not Detected	16	Not Detected
2-Methylhexane	3.5	Not Detected	14	Not Detected
3-Methylhexane	3.5	Not Detected	14	Not Detected
2-Methylpentane	3.5	Not Detected	12	Not Detected
3-Methylpentane	3.5	Not Detected	12	Not Detected
Isobutane	3.5	5.4	8.4	13
Nonane	3.5	Not Detected	19	Not Detected
Octane	3.5	Not Detected	17	Not Detected
Pentane	3.5	Not Detected	10	Not Detected
1-Pentene	3.5	Not Detected	10	Not Detected
cis-2-Pentene	3.5	Not Detected	10	Not Detected
trans-2-Pentene	3.5	Not Detected	10	Not Detected
Propylbenzene	3.5	Not Detected	17	Not Detected
2,2,4-Trimethylpentane	3.5	Not Detected	17	Not Detected
2,3,4-Trimethylpentane	3.5	Not Detected	17	Not Detected
1-Hexene	3.5	Not Detected	12	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-outside Eastside

ID#: 0406283D-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	3.5	Not Detected	17	Not Detected
4-Ethyltoluene	3.5	Not Detected	17	Not Detected
2-Ethyltoluene	3.5	Not Detected	17	Not Detected
Decane	3.5	Not Detected	21	Not Detected
1,2,3-Trimethylbenzene	3.5	Not Detected	17	Not Detected
1,3-Diethylbenzene	3.5	Not Detected	19	Not Detected
1,4-Diethylbenzene	3.5	Not Detected	20	Not Detected
Undecane	3.5	Not Detected	23	Not Detected
cis-2-Hexene	8.8	Not Detected	30	Not Detected
trans-2-Hexene	8.8	Not Detected	31	Not Detected
alpha-Pinene	8.8	Not Detected	50	Not Detected
beta-Pinene	8.8	Not Detected	50	Not Detected
Cyclopentene	3.5	Not Detected	9.9	Not Detected
1-Undecene	8.8	Not Detected	56	Not Detected
1-Decene	8.8	Not Detected	51	Not Detected
1-Nonene	3.5	Not Detected	18	Not Detected
1-Octene	3.5	Not Detected	16	Not Detected
1-Heptene	3.5	Not Detected	14	Not Detected
1,3-Butadiene	0.88	Not Detected	2.0	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283D-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406283D-05A	0406283D-05A
--------------	--------------

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

ANALYTICAL TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283D-06A

MODIFIED METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	95
Ethyl Benzene	98
Styrene	99
Toluene	96
1,2,4-Trimethylbenzene	105
1,3,5-Trimethylbenzene	105
m,p-Xylene	97
o-Xylene	97
Butane	101
1-Butene	92
cis-2-Butene	103
trans-2-butene	106
Cyclohexane	99
Cyclopentane	96
2,2-Dimethylbutane	100
2,3-Dimethylbutane	95
2,3-Dimethylpentane	100
2,4-Dimethylpentane	100
Heptane	96
Hexane	90
Isoprene	103
Cumene	106
Isopentane	99
Methylcyclohexane	99
Methylcyclopentane	92
2-Methylheptane	95
3-Methylheptane	97
2-Methylhexane	99
3-Methylhexane	98
2-Methylpentane	91
3-Methylpentane	91
Isobutane	108
Nonane	97
Octane	93
Pentane	96
1-Pentene	101
cis-2-Pentene	100
trans-2-Pentene	101
Propylbenzene	115
2,2,4-Trimethylpentane	96
2,3,4-Trimethylpentane	95
1-Hexene	93

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406283D-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

REPORT	04/12/20	0406283D-06A
DATE	04/12/20	0406283D-06A

Compound	%Recovery
3-Ethyltoluene	115
4-Ethyltoluene	108
2-Ethyltoluene	110
Decane	97
1,2,3-Trimethylbenzene	109
1,3-Diethylbenzene	105
1,4-Diethylbenzene	105
Undecane	103
cis-2-Hexene	87
trans-2-Hexene	85
alpha-Pinene	88
beta-Pinene	100
Cyclopentene	96
1-Undecene	61
1-Decene	102
1-Nonene	89
1-Octene	92
1-Heptene	91
1,3-Butadiene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130



Sample Transportation Notice

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Page 1 of 1

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陳國治



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406283E

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	06/16/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	06/28/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
03A	061504-130B-inside basement floor drain	Air Toxics Ltd. @ 82	3.0 "Hg
04A	061504-130O-outside Eastside	Air Toxics Ltd. @ 82	7.0 "Hg
05A	Lab Blank	Air Toxics Ltd. @ 82	NA
06A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

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LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406283E

Two 6 Liter Summa Canister samples were received on June 16, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection up to 40 mL of sample followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283E-03A

AIR TOXICS LTD. @ 82 GC/FID

0406283E-03A	0406283E-03A	0406283E-03A
0406283E-03A	0406283E-03A	0406283E-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	74	Not Detected
Ethene	74	Not Detected
Acetylene	74	Not Detected
Propane	74	320
Propylene	74	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061504-1300-outside Eastside

ID#: 0406283E-04A

AIR TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	88	Not Detected
Ethene	88	Not Detected
Acetylene	88	Not Detected
Propane	88	Not Detected
Propylene	88	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283E-05A

AIR TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283E-06A

AIR TOXICS LTD. @ 82 GC/FID

Compound	%Recovery
Ethane	101
Ethene	106
Acetylene	104
Propane	93
Propylene	102

Container Type: NA - Not Applicable



AIR TOXICS LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Page 1 of 1

Contact Person: <u>Robert Sullivan</u>		Project info:		Turn Around Time:	
Company: <u>Evera Corp</u>		P.O. # <u> </u>		<input checked="" type="checkbox"/> Normal	
Address: <u>2775 S. Blvd</u>		Project # <u>2005-095-360</u>		<input type="checkbox"/> Rush <u> </u>	
Phone: <u>928-336-7200</u>		Project Name: <u>Profound</u>		Specify <u> </u>	
FAX: <u>928-336-1711</u>					
Collected By: Signature <u>[Signature]</u>					

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum
				Initial Final Receipt
01A	061504-1300B - 1300NE Calumet	06/15/04 1535	Benzene only	-29.8 -3.1 3.0445
02A	061504-1300B - 1300NE Calumet	06/15/04 1635	Benzene only	-28.4 -2.9 2.0445
03A	061504-1300B - 1300NE Calumet	06/15/04 1542	Benzene only	-28.4 -2.9 2.0445
04A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
05A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
06A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
07A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
08A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
09A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
10A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
11A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
12A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
13A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
14A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
15A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
16A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
17A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
18A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
19A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445
20A	061504-1300B - 1300NE Calumet	06/15/04 1548	Benzene only	-28.4 -2.9 2.0445

Initial signed By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>	Received By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>
Field signed By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>	Received By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>
Relinquished By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>	Received By: Signature <u>[Signature]</u> Date/Time <u>06/15/04</u>

Shipper Name <u>FedEx</u>	Air Bill # <u>63007445905</u>	Opened By: <u>[Signature]</u>	Temp. (°C) <u> </u>	Condition <u> </u>	Custody Seals Intact? <u> </u>	Work Order # <u>0406288E</u>
Lab Use Only						



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406283F

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford
DATE RECEIVED:	6/16/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/24/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
03A	061504-130B-inside basement floor drain	Modified ASTM D-1946	3.0 "Hg
04A	061504-130O-outside Eastside	Modified ASTM D-1946	7.0 "Hg
05A	Lab Blank	Modified ASTM D-1946	NA
06A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/24/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406283F

Two 6 Liter Summa Canister samples were received on June 16, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061504-130B-inside basement floor drain

ID#: 0406283F-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.15	21
Methane	0.00015	0.00031
Carbon Dioxide	0.015	0.13

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061504-130O-outside Eastside

ID#: 0406283F-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.18	20
Methane	0.00018	0.00020
Carbon Dioxide	0.018	0.039

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406283F-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406283F-06A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

0406283F-06A	0406283F-06A	0406283F-06A
0406283F-06A	0406283F-06A	0406283F-06A

Compound	%Recovery
Oxygen	92
Methane	100
Carbon Dioxide	100

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. O.O.T. Hotline (800) 467-4922

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(916) 985-1000 FAX: (916) 985-1020

Page 1 of 1

Contact Person: <u>Robert Schilling</u>		Project Info:		Turn Around Time:		
Company: <u>Environ Corp</u>		P.O. #		<input checked="" type="checkbox"/> Normal		
Address: <u>2175 S. Dwyer</u> City: <u>San Jose</u> State: <u>CA</u> Zip: <u>95128</u>		Project # <u>0005 093-260</u>		<input type="checkbox"/> Rush Specify		
Phone: <u>408-256-7000</u> FAX: <u>408-206-1711</u>		Project Name: <u>Environ Corp</u>				
Collected By: Signature <u>[Signature]</u>				2/11/99		
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum Initial	Canister Pressure / Vacuum Final	Receipt
061504-130B	061504-130B	6/5/94 1535	0.82 methane	-29.8	-2.1	3045
061504-130C	061504-130C	6/5/94 1635	" "	-28.4	-2.9	7.046
061504-130BNE Canister	061504-130BNE Canister	6/5/94 1542	Pentane only			
061504-130B-SW Canister	061504-130B-SW Canister	6/5/94 1548	Pentane only			
Notes: SN 2768 SN 2032 6/5/94						
Received By: (Signature) <u>[Signature]</u> Date/Time <u>6/5/94 1542</u>						
Relinquished By: (Signature) <u>[Signature]</u> Date/Time <u>6/5/94 1548</u>						
Received By: (Signature) <u>[Signature]</u> Date/Time <u>6/5/94 1548</u>						
Relinquished By: (Signature) <u>[Signature]</u> Date/Time <u>6/5/94 1548</u>						
Shipper Name		Air Bill #	Opened By:	Temp. (°C)	Condition	Work Order #
FedEx	630677445925				Good	0406283F
Lab Use Only						

APPENDIX G

AIR TOXICS LTD. - LABORATORY REPORT 0406315

Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
061604-HCC-MSD	Hartford Community Center. 1st floor - Men's bathroom adjacent to floor drain	Indoor Air /Grab Summa Canister	0406315A-01A	Benzene rerun	Mod. TO-15
			0406315B-01A	VOCs	Mod. TO-15
			0406315C-01A	VOCs	Mod. TO-15
			0406315D-01A	Additional VOCs	@ 82 GC/FID
			0406315E-01A	Mod. Natural Gases	ASTM D-1946
061604-HCC-Outside	Outside of Hartford Community Center Building	Outdoor Air/ Grab Summa Canister	0406315A-02A	Benzene rerun	Mod. TO-15
			0406315B-02A	VOCs	Mod. TO-15
			0406315C-02A	VOCs	Mod. TO-15
			0406315D-02A	Additional VOCs	@ 82 GC/FID
			0406315E-02A	Mod. Natural Gases	ASTM D-1946
061604-HCC-CAF-SE Outlet Void Space	Hartford Community Center Cafeteria - below electrical outlet in SE corner; piece of mortar missing, hole present	Indoor Air/Grab Summa Canister	0406315A-03A	Benzene rerun	Mod. TO-15
			0406315B-03A	VOCs	Mod. TO-15
			0406315C-03A	VOCs	Mod. TO-15
			0406315D-03A	Additional VOCs	@ 82 GC/FID
			0406315E-03A	Mod. Natural Gases	ASTM D-1946



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406315A

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford Ill. Hartford
DATE RECEIVED:	6/17/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	6/29/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT</u> <u>VAC./PRES.</u>
01A	061604-HCC-MSD	Modified TO-15	4.0 "Hg
01AA	061604-HCC-MSD Duplicate	Modified TO-15	4.0 "Hg
02A	061604-HCC-Outside	Modified TO-15	4.5 "Hg
03A	061604-HCC-CAF-SE Outlet Void Space	Modified TO-15	Tedlar Bag
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/30/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406315A

Two 6 Liter Summa Canister and one 5 Liter Tedlar Bag samples were received on June 17, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	<= 30 %RSD (TO-14A)	<= 30 % RSD with 2 compounds allowed out to <= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.31	17	1.0	55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD Duplicate

ID#: 0406315A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	061604	0406315A-01AA
Client	061604	0406315A-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.31	17	1.0	54

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.32	0.53	1.0	1.7

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client:	061604	Date of Collection:	8/1/04
Lab File:	0406315A-03A	Date of Analysis:	8/10/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	7.5	0.65	24

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILED	03/10/20	04/10/20
04/10/20	04/10/20	04/10/20

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.20	Not Detected	0.65	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406315A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FIELD NO.	061802	Date of Collection
ID#	1500	Date of Analysis 03/13/03 ID-05A

Compound	%Recovery
Benzene	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406315A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		94
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130



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AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406315B

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford Ill. Hartford
DATE RECEIVED:	6/17/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	6/30/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	061604-HCC-MSD	Modified TO-15	4.0 "Hg
02A	061604-HCC-Outside	Modified TO-15	4.5 "Hg
03A	061604-HCC-CAF-SE Outlet Void Space	Modified TO-15	Tedlar Bag
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/30/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406315B

Two 6 Liter Summa Canister and one 5 Liter Tedlar Bag samples were received on June 17, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	<= 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	< RL
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for > 40 % D.
Initial Calibration	<= 30 %RSD (TO-14A)	<= 30 % RSD with 2 compounds allowed out to <= 40 % RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples 061604-HCC-MSD and 061604-HCC-CAF-SE Outlet Void Space

due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

PROJECT: 0625	Date of Collection: 8/18
DATE: 8/20	Date of Analysis: 8/20/14 12:51 PM

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	3.1	Not Detected	16	Not Detected
Freon 114	3.1	Not Detected	22	Not Detected
Chloromethane	12	Not Detected	26	Not Detected
Vinyl Chloride	3.1	Not Detected	8.0	Not Detected
1,3-Butadiene	3.1	Not Detected	7.0	Not Detected
Bromomethane	3.1	Not Detected	12	Not Detected
Chloroethane	3.1	Not Detected	8.3	Not Detected
Freon 11	3.1	Not Detected	18	Not Detected
Ethanol	12	98	24	190
Freon 113	3.1	Not Detected	24	Not Detected
1,1-Dichloroethene	3.1	Not Detected	12	Not Detected
Acetone	12	20	30	49
2-Propanol	12	Not Detected	31	Not Detected
Carbon Disulfide	3.1	Not Detected	9.8	Not Detected
3-Chloropropene	12	Not Detected	39	Not Detected
Methylene Chloride	3.1	Not Detected	11	Not Detected
Methyl tert-butyl ether	3.1	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	3.1	Not Detected	12	Not Detected
Hexane	3.1	67	11	240
Vinyl Acetate	12	Not Detected	44	Not Detected
1,1-Dichloroethane	3.1	Not Detected	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.1	4.0	9.3	12
cis-1,2-Dichloroethene	3.1	Not Detected	12	Not Detected
Tetrahydrofuran	3.1	Not Detected	9.3	Not Detected
Chloroform	3.1	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.1	Not Detected	17	Not Detected
Cyclohexane	3.1	37	11	130
Carbon Tetrachloride	3.1	Not Detected	20	Not Detected
2,2,4-Trimethylpentane	3.1	100	15	480
Benzene	3.1	15	10	49
1,2-Dichloroethane	3.1	Not Detected	13	Not Detected
Heptane	3.1	Not Detected	13	Not Detected
Trichloroethene	3.1	Not Detected	17	Not Detected
1,2-Dichloropropane	3.1	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	45	Not Detected
Bromodichloromethane	3.1	Not Detected	21	Not Detected
cis-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
4-Methyl-2-pentanone	3.1	Not Detected	13	Not Detected
Toluene	3.1	Not Detected	12	Not Detected
trans-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.1	Not Detected	17	Not Detected
Tetrachloroethene	3.1	Not Detected	21	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	12	Not Detected	52	Not Detected
Dibromochloromethane	3.1	Not Detected	27	Not Detected
1,2-Dibromoethane (EDB)	3.1	Not Detected	24	Not Detected
Chlorobenzene	3.1	Not Detected	14	Not Detected
Ethyl Benzene	3.1	Not Detected	14	Not Detected
m,p-Xylene	3.1	Not Detected	14	Not Detected
o-Xylene	3.1	Not Detected	14	Not Detected
Styrene	3.1	Not Detected	13	Not Detected
Bromoform	3.1	Not Detected	32	Not Detected
Cumene	3.1	Not Detected	15	Not Detected
1,1,2,2-Tetrachloroethane	3.1	Not Detected	22	Not Detected
Propylbenzene	3.1	Not Detected	15	Not Detected
4-Ethyltoluene	3.1	Not Detected	15	Not Detected
1,3,5-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.1	430	19	2600
alpha-Chlorotoluene	3.1	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	94	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.79	Not Detected	4.0	Not Detected
Freon 114	0.79	Not Detected	5.6	Not Detected
Chloromethane	3.2	Not Detected	6.6	Not Detected
Vinyl Chloride	0.79	Not Detected	2.0	Not Detected
1,3-Butadiene	0.79	Not Detected	1.8	Not Detected
Bromomethane	0.79	Not Detected	3.1	Not Detected
Chloroethane	0.79	Not Detected	2.1	Not Detected
Freon 11	0.79	Not Detected	4.5	Not Detected
Ethanol	3.2	Not Detected	6.0	Not Detected
Freon 113	0.79	Not Detected	6.2	Not Detected
1,1-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Acetone	3.2	4.0	7.6	9.8
2-Propanol	3.2	Not Detected	7.9	Not Detected
Carbon Disulfide	0.79	Not Detected	2.5	Not Detected
3-Chloropropene	3.2	Not Detected	10	Not Detected
Methylene Chloride	0.79	0.81	2.8	2.8
Methyl tert-butyl ether	0.79	Not Detected	2.9	Not Detected
trans-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Hexane	0.79	Not Detected	2.8	Not Detected
Vinyl Acetate	3.2	Not Detected	11	Not Detected
1,1-Dichloroethane	0.79	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.79	Not Detected	2.4	Not Detected
cis-1,2-Dichloroethene	0.79	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.79	Not Detected	2.4	Not Detected
Chloroform	0.79	Not Detected	3.9	Not Detected
1,1,1-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Cyclohexane	0.79	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.79	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.79	Not Detected	3.8	Not Detected
Benzene	0.79	Not Detected	2.6	Not Detected
1,2-Dichloroethane	0.79	Not Detected	3.2	Not Detected
Heptane	0.79	Not Detected	3.3	Not Detected
Trichloroethene	0.79	Not Detected	4.3	Not Detected
1,2-Dichloropropane	0.79	Not Detected	3.7	Not Detected
1,4-Dioxane	3.2	Not Detected	12	Not Detected
Bromodichloromethane	0.79	Not Detected	5.4	Not Detected
cis-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.79	Not Detected	3.3	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
trans-1,3-Dichloropropene	0.79	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.79	Not Detected	4.4	Not Detected
Tetrachloroethene	0.79	Not Detected	5.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.2	Not Detected	13	Not Detected
Dibromochloromethane	0.79	Not Detected	6.8	Not Detected
1,2-Dibromoethane (EDB)	0.79	Not Detected	6.2	Not Detected
Chlorobenzene	0.79	Not Detected	3.7	Not Detected
Ethyl Benzene	0.79	Not Detected	3.5	Not Detected
m,p-Xylene	0.79	Not Detected	3.5	Not Detected
o-Xylene	0.79	Not Detected	3.5	Not Detected
Styrene	0.79	Not Detected	3.4	Not Detected
Bromoform	0.79	Not Detected	8.3	Not Detected
Cumene	0.79	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.79	Not Detected	5.5	Not Detected
Propylbenzene	0.79	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,4-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
alpha-Chlorotoluene	0.79	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.79	Not Detected	4.8	Not Detected
1,2,4-Trichlorobenzene	3.2	Not Detected	24	Not Detected
Hexachlorobutadiene	3.2	Not Detected	34	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	506252	Date of Collection	04/04/04
Dir. File	57	Date of Analysis	04/05/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	29	Not Detected	140	Not Detected
Freon 114	29	Not Detected	200	Not Detected
Chloromethane	120	Not Detected	240	Not Detected
Vinyl Chloride	29	Not Detected	75	Not Detected
1,3-Butadiene	29	Not Detected	65	Not Detected
Bromomethane	29	Not Detected	110	Not Detected
Chloroethane	29	Not Detected	77	Not Detected
Freon 11	29	Not Detected	160	Not Detected
Ethanol	120	Not Detected	220	Not Detected
Freon 113	29	Not Detected	220	Not Detected
1,1-Dichloroethene	29	Not Detected	120	Not Detected
Acetone	120	Not Detected	280	Not Detected
2-Propanol	120	Not Detected	290	Not Detected
Carbon Disulfide	29	Not Detected	91	Not Detected
3-Chloropropene	120	Not Detected	370	Not Detected
Methylene Chloride	29	Not Detected	100	Not Detected
Methyl tert-butyl ether	29	Not Detected	100	Not Detected
trans-1,2-Dichloroethene	29	Not Detected	120	Not Detected
Hexane	29	65	100	230
Vinyl Acetate	120	Not Detected	410	Not Detected
1,1-Dichloroethane	29	Not Detected	120	Not Detected
2-Butanone (Methyl Ethyl Ketone)	29	Not Detected	86	Not Detected
cis-1,2-Dichloroethene	29	Not Detected	120	Not Detected
Tetrahydrofuran	29	Not Detected	86	Not Detected
Chloroform	29	Not Detected	140	Not Detected
1,1,1-Trichloroethane	29	Not Detected	160	Not Detected
Cyclohexane	29	340	100	1200
Carbon Tetrachloride	29	Not Detected	180	Not Detected
2,2,4-Trimethylpentane	29	2200	140	11000
Benzene	29	Not Detected	94	Not Detected
1,2-Dichloroethane	29	Not Detected	120	Not Detected
Heptane	29	Not Detected	120	Not Detected
Trichloroethene	29	Not Detected	160	Not Detected
1,2-Dichloropropane	29	Not Detected	140	Not Detected
1,4-Dioxane	120	Not Detected	420	Not Detected
Bromodichloromethane	29	Not Detected	200	Not Detected
cis-1,3-Dichloropropene	29	Not Detected	130	Not Detected
4-Methyl-2-pentanone	29	Not Detected	120	Not Detected
Toluene	29	Not Detected	110	Not Detected
trans-1,3-Dichloropropene	29	Not Detected	130	Not Detected
1,1,2-Trichloroethane	29	Not Detected	160	Not Detected
Tetrachloroethene	29	Not Detected	200	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	120	Not Detected	480	Not Detected
Dibromochloromethane	29	Not Detected	250	Not Detected
1,2-Dibromoethane (EDB)	29	Not Detected	220	Not Detected
Chlorobenzene	29	Not Detected	130	Not Detected
Ethyl Benzene	29	Not Detected	130	Not Detected
m,p-Xylene	29	Not Detected	130	Not Detected
o-Xylene	29	Not Detected	130	Not Detected
Styrene	29	Not Detected	120	Not Detected
Bromoform	29	Not Detected	300	Not Detected
Cumene	29	Not Detected	140	Not Detected
1,1,2,2-Tetrachloroethane	29	Not Detected	200	Not Detected
Propylbenzene	29	Not Detected	140	Not Detected
4-Ethyltoluene	29	Not Detected	140	Not Detected
1,3,5-Trimethylbenzene	29	Not Detected	140	Not Detected
1,2,4-Trimethylbenzene	29	Not Detected	140	Not Detected
1,3-Dichlorobenzene	29	Not Detected	180	Not Detected
1,4-Dichlorobenzene	29	Not Detected	180	Not Detected
alpha-Chlorotoluene	29	Not Detected	150	Not Detected
1,2-Dichlorobenzene	29	Not Detected	180	Not Detected
1,2,4-Trichlorobenzene	120	Not Detected	870	Not Detected
Hexachlorobutadiene	120	Not Detected	1200	Not Detected

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	06250	Lab: 06250
Dir: 06250	06250	06250

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406315B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	062502	Date of Collection	N/A
File Path	1.00	Date of Analysis	6/25/04 09:52 AM

Compound	%Recovery
Freon 12	78
Freon 114	94
Chloromethane	110
Vinyl Chloride	84
1,3-Butadiene	88
Bromomethane	115
Chloroethane	97
Freon 11	85
Ethanol	105
Freon 113	76
1,1-Dichloroethene	82
Acetone	96
2-Propanol	116
Carbon Disulfide	83
3-Chloropropene	103
Methylene Chloride	102
Methyl tert-butyl ether	82
trans-1,2-Dichloroethene	76
Hexane	87
Vinyl Acetate	104
1,1-Dichloroethane	85
2-Butanone (Methyl Ethyl Ketone)	86
cis-1,2-Dichloroethene	86
Tetrahydrofuran	88
Chloroform	76
1,1,1-Trichloroethane	83
Cyclohexane	79
Carbon Tetrachloride	95
2,2,4-Trimethylpentane	87
Benzene	78
1,2-Dichloroethane	83
Heptane	78
Trichloroethene	76
1,2-Dichloropropane	86
1,4-Dioxane	89
Bromodichloromethane	84
cis-1,3-Dichloropropene	84
4-Methyl-2-pentanone	97
Toluene	77
trans-1,3-Dichloropropene	91
1,1,2-Trichloroethane	79
Tetrachloroethene	75

SAMPLE NAME: CCV
ID#: 0406315B-05A
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

[illegible]

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406315B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

SPID: 1100	062508	Date of Collection: 1/1
0.2500	100	Date of Entry: 0625110001A

Compound	%Recovery
Freon 12	75
Freon 114	91
Chloromethane	103
Vinyl Chloride	82
1,3-Butadiene	87
Bromomethane	91
Chloroethane	127
Freon 11	81
Ethanol	129
Freon 113	77
1,1-Dichloroethene	80
Acetone	100
2-Propanol	99
Carbon Disulfide	85
3-Chloropropene	90
Methylene Chloride	95
Methyl tert-butyl ether	89
trans-1,2-Dichloroethene	80
Hexane	93
Vinyl Acetate	111
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	76
Tetrahydrofuran	100
Chloroform	82
1,1,1-Trichloroethane	94
Cyclohexane	87
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	80
Benzene	83
1,2-Dichloroethane	95
Heptane	86
Trichloroethene	86
1,2-Dichloropropane	105
1,4-Dioxane	102
Bromodichloromethane	89
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	113
Toluene	75
trans-1,3-Dichloropropene	104
1,1,2-Trichloroethane	80
Tetrachloroethene	76

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406315B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
2-Hexanone	125
Dibromochloromethane	92
1,2-Dibromoethane (EDB)	85
Chlorobenzene	78
Ethyl Benzene	74
m,p-Xylene	73
o-Xylene	78
Styrene	87
Bromoform	90
Cumene	76
1,1,2,2-Tetrachloroethane	87
Propylbenzene	59 Q
4-Ethyltoluene	83
1,3,5-Trimethylbenzene	79
1,2,4-Trimethylbenzene	80
1,3-Dichlorobenzene	77
1,4-Dichlorobenzene	76
alpha-Chlorotoluene	125
1,2-Dichlorobenzene	74
1,2,4-Trichlorobenzene	86
Hexachlorobutadiene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	98	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

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AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406315C

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093-360 Hartford Ill. Hartford

DATE RECEIVED: 06/17/04

CONTACT: Community Center
DeDe Dodge

DATE COMPLETED: 06/30/04

FRACTION #

NAME

TEST

RECEIPT
VAC./PRES.

01A	061604-HCC-MSD
02A	061604-HCC-Outside
03A	061604-HCC-CAF-SE Outlet Void Space
04A	Lab Blank
05A	CCV

Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs
Modified TO-15/TICs

4.0 "Hg
4.5 "Hg
Tedlar Bag
NA
NA

CERTIFIED BY:

Laboratory Director

DATE: 06/30/04

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406315C

Two 6 Liter Summa Canister and one 5 Liter Tedlar Bag samples were received on June 17, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction no

performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Sample Name	061604-HCC-MSD	Date of Collection	6/18/04
Sample ID	0406315C-01A	Date of Analysis	6/25/04 08:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	31	Not Detected	100	Not Detected
Ethyl Benzene	31	Not Detected	140	Not Detected
Styrene	31	Not Detected	130	Not Detected
Toluene	31	Not Detected	120	Not Detected
1,2,4-Trimethylbenzene	31	Not Detected	150	Not Detected
1,3,5-Trimethylbenzene	31	Not Detected	150	Not Detected
m,p-Xylene	31	Not Detected	140	Not Detected
o-Xylene	31	Not Detected	140	Not Detected
Butane	120	2200	300	5300
1-Butene	120	Not Detected	290	Not Detected
cis-2-Butene	120	Not Detected	290	Not Detected
trans-2-butene	120	Not Detected	290	Not Detected
Cyclohexane	120	Not Detected	430	Not Detected
Cyclopentane	120	Not Detected	360	Not Detected
2,2-Dimethylbutane	120	Not Detected	440	Not Detected
2,3-Dimethylbutane	120	260	440	920
2,3-Dimethylpentane	120	130	520	550
2,4-Dimethylpentane	120	Not Detected	520	Not Detected
Heptane	120	Not Detected	520	Not Detected
Hexane	120	Not Detected	440	Not Detected
Isoprene	120	Not Detected	350	Not Detected
Cumene	120	Not Detected	620	Not Detected
Isopentane	120	4900	370	15000
Methylcyclohexane	120	Not Detected	510	Not Detected
Methylcyclopentane	120	150	430	530
2-Methylheptane	120	Not Detected	590	Not Detected
3-Methylheptane	120	Not Detected	590	Not Detected
2-Methylhexane	120	Not Detected	520	Not Detected
3-Methylhexane	120	Not Detected	520	Not Detected
2-Methylpentane	120	520	440	1900
3-Methylpentane	120	420	440	1500
Isobutane	120	1100	300	2600
Nonane	120	Not Detected	660	Not Detected
Octane	120	Not Detected	590	Not Detected
Pentane	120	970	370	2900
1-Pentene	120	Not Detected	360	Not Detected
cis-2-Pentene	120	Not Detected	360	Not Detected
trans-2-Pentene	120	Not Detected	360	Not Detected
Propylbenzene	120	Not Detected	620	Not Detected
2,2,4-Trimethylpentane	120	Not Detected	590	Not Detected
2,3,4-Trimethylpentane	120	Not Detected	590	Not Detected
1-Hexene	120	Not Detected	430	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	120	Not Detected	620	Not Detected
4-Ethyltoluene	120	Not Detected	620	Not Detected
2-Ethyltoluene	120	Not Detected	620	Not Detected
Decane	120	Not Detected	730	Not Detected
1,2,3-Trimethylbenzene	120	Not Detected	620	Not Detected
1,3-Diethylbenzene	120	Not Detected	690	Not Detected
1,4-Diethylbenzene	120	Not Detected	690	Not Detected
Undecane	120	Not Detected	800	Not Detected
cis-2-Hexene	310	Not Detected	1100	Not Detected
trans-2-Hexene	310	Not Detected	1100	Not Detected
alpha-Pinene	310	Not Detected	1800	Not Detected
beta-Pinene	310	Not Detected	1800	Not Detected
Cyclopentene	120	Not Detected	350	Not Detected
1-Undecene	310	Not Detected	2000	Not Detected
1-Decene	310	Not Detected	1800	Not Detected
1-Nonene	120	Not Detected	650	Not Detected
1-Octene	120	Not Detected	580	Not Detected
1-Heptene	120	Not Detected	510	Not Detected
1,3-Butadiene	31	Not Detected	70	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	061604-HCC-Outside	Date of Collection	06/16/04
File #	15	Date of Analysis	06/25/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.79	Not Detected	2.6	Not Detected
Ethyl Benzene	0.79	Not Detected	3.5	Not Detected
Styrene	0.79	Not Detected	3.4	Not Detected
Toluene	0.79	Not Detected	3.0	Not Detected
1,2,4-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
1,3,5-Trimethylbenzene	0.79	Not Detected	3.9	Not Detected
m,p-Xylene	0.79	Not Detected	3.5	Not Detected
o-Xylene	0.79	Not Detected	3.5	Not Detected
Butane	3.2	5.1	7.6	12
1-Butene	3.2	Not Detected	7.4	Not Detected
cis-2-Butene	3.2	Not Detected	7.4	Not Detected
trans-2-butene	3.2	Not Detected	7.4	Not Detected
Cyclohexane	3.2	Not Detected	11	Not Detected
Cyclopentane	3.2	Not Detected	9.2	Not Detected
2,2-Dimethylbutane	3.2	Not Detected	11	Not Detected
2,3-Dimethylbutane	3.2	Not Detected	11	Not Detected
2,3-Dimethylpentane	3.2	Not Detected	13	Not Detected
2,4-Dimethylpentane	3.2	Not Detected	13	Not Detected
Heptane	3.2	Not Detected	13	Not Detected
Hexane	3.2	Not Detected	11	Not Detected
Isoprene	3.2	Not Detected	8.9	Not Detected
Cumene	3.2	Not Detected	16	Not Detected
Isopentane	3.2	12	9.5	37
Methylcyclohexane	3.2	Not Detected	13	Not Detected
Methylcyclopentane	3.2	Not Detected	11	Not Detected
2-Methylheptane	3.2	Not Detected	15	Not Detected
3-Methylheptane	3.2	Not Detected	15	Not Detected
2-Methylhexane	3.2	Not Detected	13	Not Detected
3-Methylhexane	3.2	Not Detected	13	Not Detected
2-Methylpentane	3.2	Not Detected	11	Not Detected
3-Methylpentane	3.2	Not Detected	11	Not Detected
Isobutane	3.2	4.0	7.6	9.7
Nonane	3.2	Not Detected	17	Not Detected
Octane	3.2	Not Detected	15	Not Detected
Pentane	3.2	Not Detected	9.5	Not Detected
1-Pentene	3.2	Not Detected	9.2	Not Detected
cis-2-Pentene	3.2	Not Detected	9.2	Not Detected
trans-2-Pentene	3.2	Not Detected	9.2	Not Detected
Propylbenzene	3.2	Not Detected	16	Not Detected
2,2,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
2,3,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
1-Hexene	3.2	Not Detected	11	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	3.2	Not Detected	16	Not Detected
4-Ethyltoluene	3.2	Not Detected	16	Not Detected
2-Ethyltoluene	3.2	Not Detected	16	Not Detected
Decane	3.2	Not Detected	19	Not Detected
1,2,3-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,3-Diethylbenzene	3.2	Not Detected	18	Not Detected
1,4-Diethylbenzene	3.2	Not Detected	18	Not Detected
Undecane	3.2	Not Detected	20	Not Detected
cis-2-Hexene	7.9	Not Detected	28	Not Detected
trans-2-Hexene	7.9	Not Detected	28	Not Detected
alpha-Pinene	7.9	Not Detected	45	Not Detected
beta-Pinene	7.9	Not Detected	45	Not Detected
Cyclopentene	3.2	Not Detected	8.9	Not Detected
1-Undecene	7.9	Not Detected	50	Not Detected
1-Decene	7.9	Not Detected	46	Not Detected
1-Nonene	3.2	Not Detected	16	Not Detected
1-Octene	3.2	Not Detected	15	Not Detected
1-Heptene	3.2	Not Detected	13	Not Detected
1,3-Butadiene	0.79	Not Detected	1.8	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	109	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	605211	DATE	2014/04/21/10:21:00
FILE #	377	FILED	2014/04/21/10:21:00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	290	Not Detected	940	Not Detected
Ethyl Benzene	290	Not Detected	1300	Not Detected
Styrene	290	Not Detected	1200	Not Detected
Toluene	290	Not Detected	1100	Not Detected
1,2,4-Trimethylbenzene	290	Not Detected	1400	Not Detected
1,3,5-Trimethylbenzene	290	Not Detected	1400	Not Detected
m,p-Xylene	290	Not Detected	1300	Not Detected
o-Xylene	290	Not Detected	1300	Not Detected
Butane	1200	7400	2800	18000
1-Butene	1200	Not Detected	2700	Not Detected
cis-2-Butene	1200	Not Detected	2700	Not Detected
trans-2-butene	1200	Not Detected	2700	Not Detected
Cyclohexane	1200	Not Detected	4000	Not Detected
Cyclopentane	1200	Not Detected	3400	Not Detected
2,2-Dimethylbutane	1200	Not Detected	4100	Not Detected
2,3-Dimethylbutane	1200	2300	4100	8400
2,3-Dimethylpentane	1200	1900	4800	7900
2,4-Dimethylpentane	1200	1400	4800	5800
Heptane	1200	Not Detected	4800	Not Detected
Hexane	1200	Not Detected	4100	Not Detected
Isoprene	1200	Not Detected	3300	Not Detected
Cumene	1200	Not Detected	5800	Not Detected
Isopentane	1200	32000	3500	94000
Methylcyclohexane	1200	Not Detected	4700	Not Detected
Methylcyclopentane	1200	Not Detected	4000	Not Detected
2-Methylheptane	1200	Not Detected	5500	Not Detected
3-Methylheptane	1200	Not Detected	5500	Not Detected
2-Methylhexane	1200	Not Detected	4800	Not Detected
3-Methylhexane	1200	Not Detected	4800	Not Detected
2-Methylpentane	1200	3100	4100	11000
3-Methylpentane	1200	3500	4100	12000
Isobutane	1200	9700	2800	23000
Nonane	1200	Not Detected	6200	Not Detected
Octane	1200	Not Detected	5500	Not Detected
Pentane	1200	1200	3500	3500
1-Pentene	1200	Not Detected	3400	Not Detected
cis-2-Pentene	1200	Not Detected	3400	Not Detected
trans-2-Pentene	1200	Not Detected	3400	Not Detected
Propylbenzene	1200	Not Detected	5800	Not Detected
2,2,4-Trimethylpentane	1200	2000	5500	9600
2,3,4-Trimethylpentane	1200	Not Detected	5500	Not Detected
1-Hexene	1200	Not Detected	4000	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	1200	Not Detected	5800	Not Detected
4-Ethyltoluene	1200	Not Detected	5800	Not Detected
2-Ethyltoluene	1200	Not Detected	5800	Not Detected
Decane	1200	Not Detected	6800	Not Detected
1,2,3-Trimethylbenzene	1200	Not Detected	5800	Not Detected
1,3-Diethylbenzene	1200	Not Detected	6400	Not Detected
1,4-Diethylbenzene	1200	Not Detected	6400	Not Detected
Undecane	1200	Not Detected	7500	Not Detected
cis-2-Hexene	2900	Not Detected	10000	Not Detected
trans-2-Hexene	2900	Not Detected	10000	Not Detected
alpha-Pinene	2900	Not Detected	16000	Not Detected
beta-Pinene	2900	Not Detected	16000	Not Detected
Cyclopentene	1200	Not Detected	3300	Not Detected
1-Undecene	2900	Not Detected	18000	Not Detected
1-Decene	2900	Not Detected	17000	Not Detected
1-Nonene	1200	Not Detected	6000	Not Detected
1-Octene	1200	Not Detected	5400	Not Detected
1-Heptene	1200	Not Detected	4700	Not Detected
1,3-Butadiene	290	Not Detected	650	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 5 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	506240	Date of Collection	11/15/2011
File Path	10	Date of Analysis	11/15/2011

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406315C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	103
Ethyl Benzene	103
Styrene	112
Toluene	104
1,2,4-Trimethylbenzene	114
1,3,5-Trimethylbenzene	113
m,p-Xylene	107
o-Xylene	105
Butane	112
1-Butene	102
cis-2-Butene	111
trans-2-butene	114
Cyclohexane	104
Cyclopentane	111
2,2-Dimethylbutane	111
2,3-Dimethylbutane	108
2,3-Dimethylpentane	102
2,4-Dimethylpentane	104
Heptane	103
Hexane	105
Isoprene	113
Cumene	113
Isopentane	114
Methylcyclohexane	101
Methylcyclopentane	100
2-Methylheptane	101
3-Methylheptane	101
2-Methylhexane	105
3-Methylhexane	103
2-Methylpentane	105
3-Methylpentane	105
Isobutane	123
Nonane	106
Octane	101
Pentane	112
1-Pentene	113
cis-2-Pentene	112
trans-2-Pentene	112
Propylbenzene	124
2,2,4-Trimethylpentane	102
2,3,4-Trimethylpentane	99
1-Hexene	106

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406315C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
3-Ethyltoluene	106
4-Ethyltoluene	138 Q
2-Ethyltoluene	120
Decane	108
1,2,3-Trimethylbenzene	121
1,3-Diethylbenzene	116
1,4-Diethylbenzene	117
Undecane	117
cis-2-Hexene	112
trans-2-Hexene	108
alpha-Pinene	105
beta-Pinene	109
Cyclopentene	110
1-Undecene	102
1-Decene	136
1-Nonene	103
1-Octene	102
1-Heptene	103
1,3-Butadiene	117

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Sample Transportation Notice

AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

180 BLUE HAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

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Page 1 of 1

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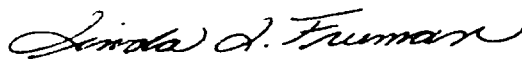
WORK ORDER #: 0406315D

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford Ill. Hartford
DATE RECEIVED:	6/17/2004	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	6/29/2004		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	061604-HCC-MSD	Air Toxics Ltd. @ 82	4.0 "Hg
02A	061604-HCC-Outside	Air Toxics Ltd. @ 82	4.5 "Hg
03A	061604-HCC-CAF-SE Outlet Void Space	Air Toxics Ltd. @ 82	Tedlar Bag
03AA	061604-HCC-CAF-SE Outlet Void Space Dup	Air Toxics Ltd. @ 82	Tedlar Bag
04A	Lab Blank	Air Toxics Ltd. @ 82	NA
05A	LCS	Air Toxics Ltd. @ 82	NA

CERTIFIED BY:



Laboratory Director

DATE: 06/29/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406315D

Two 6 Liter Summa Canister and one 5 Liter Tedlar Bag samples were received on June 17, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of a 1.0 ml sample through a fixed sampling loop followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315D-01A

AIT TOXICS LTD. @ 82 GC/FID

FILE NO.	203/001	DATE/TIME
DATE/TIME	05/05/04	08:00/08:00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	78	Not Detected
Ethene	78	Not Detected
Acetylene	78	Not Detected
Propane	78	Not Detected
Propylene	78	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.
SAMPLE NAME: 061604-HCC-Outside
ID#: 0406315D-02A
AIT TOXICS LTD. @ 82 GC/FID

File #	205180	Date of Collection	6/15/04
DI #	15	Date of Analysis	6/15/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	79	Not Detected
Ethene	79	Not Detected
Acetylene	79	Not Detected
Propane	79	Not Detected
Propylene	79	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315D-03A

AIT TOXICS LTD. @ 82 GC/FID

061604-HCC-CAF-SE Outlet Void Space	0406315D-03A	0406315D-03A
0406315D-03A	0406315D-03A	0406315D-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	91
Propylene	50	Not Detected

Container Type: 5 Liter Tedlar Bag

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space Duplicate

ID#: 0406315D-03AA

AIT TOXICS LTD. @ 82 GC/FID

File Name	2061807	Date of Collection	8/1/07
Dil Factor	1.0	Date of Analysis	8/2/07

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	83
Propylene	50	Not Detected

Container Type: 5 Liter Tedlar Bag

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315D-04A

AIT TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406315D-05A

AIT TOXICS LTD. @ 82 GC/FID

File Name	2061811	Date of Collection	
Dil. Factor	1.00	Date of Analysis	7/10/2011

Compound	%Recovery
Ethane	106
Ethene	110
Acetylene	118
Propane	110
Propylene	113

Container Type: NA - Not Applicable



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406315E

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093-360 Hartford Ill. Hartford
DATE RECEIVED:	6/17/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	6/29/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	061604-HCC-MSD	Modified ASTM D-1946	4.0 "Hg
02A	061604-HCC-Outside	Modified ASTM D-1946	4.5 "Hg
03A	061604-HCC-CAF-SE Outlet Void Space	Modified ASTM D-1946	Tedlar Bag
04A	Lab Blank	Modified ASTM D-1946	NA
05A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/29/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- A1 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406315E

Two 6 Liter Summa Canister and one 5 Liter Tedlar Bag samples were received on June 17, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-MSD

ID#: 0406315E-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name	906181	Date of Collection	8/10/00
Client	115	Date of Analysis	8/10/00 10:50 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Methane	0.00016	0.014
Carbon Dioxide	0.016	0.059

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-Outside

ID#: 0406315E-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	21
Methane	0.00016	0.00026
Carbon Dioxide	0.016	0.042

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061604-HCC-CAF-SE Outlet Void Space

ID#: 0406315E-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

FID#	906131	Date of Collection	8/1/00
D. #	1100	Date of Analysis	8/1/00

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	20
Methane	0.00010	0.11
Carbon Dioxide	0.010	0.13

Container Type: 5 Liter Tedlar Bag

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406315E-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406315E-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name	906182	Date of Collection	
Dil Factor	1.00	Date of Analysis	8/10/2011

Compound	%Recovery
Oxygen	92
Methane	100
Carbon Dioxide	100

Container Type: NA - Not Applicable



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Page 1 of 1

Dr. J. M. B. B. B. B.

APPENDIX H

AIR TOXICS LTD. - LABORATORY REPORT 0406343					
Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
061704-HCC-Outside West	Outside of Hartford Community Center - West side of building.	Outside Air / 30-minute Summa Canister	0406343B-01A	VOCs	Mod. TO-15
			0406343BR1-01A	VOCs	Mod. TO-15
			0406343C-01A	VOCs	Mod. TO-15
			0406343D-01A	Additional VOCs	@ 82 GC/FID
			0406343E-01A	Mod. Natural Gases	ASTM D-1946
061704-HCC-WFD	Hartford Community Center 1st Floor - Women's bathroom adjacent to floor drain.	Indoor Air/30-minute Summa Canister	0406343B-02A	VOCs	Mod. TO-15
			0406343BR1-02A	VOCs	Mod. TO-15
			0406343C-02A	VOCs	Mod. TO-15
			0406343D-02A	Additional VOCs	@ 82 GC/FID
			0406343E-02A	Mod. Natural Gases	ASTM D-1946
061704-HCC-MSD	Hartford Community Center 1st Floor - Men's bathroom adjacent to shower drain.	Indoor Air/30-minute Summa Canister	0406343B-03A	VOCs	Mod. TO-15
			0406343BR1-03A	VOCs	Mod. TO-15
			0406343C-03A	VOCs	Mod. TO-15
			0406343D-03A	Additional VOCs	@ 82 GC/FID
			0406343E-03A	Mod. Natural Gases	ASTM D-1946



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406343B

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005.093.360 Hartford, IL Hartford
DATE RECEIVED:	06/18/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	07/02/04		
DATE REISSUED:	7/12/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	061704-HCC-Outside West	Modified TO-15	5.5 "Hg
02A	061704-HCC-WFD	Modified TO-15	4.0 "Hg
03A	061704-HCC-MSD	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 07/02/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406343B

Three 6 Liter Summa Canister samples were received on June 18, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The daily calibration standard (CCV) analyzed on 06/27/04 did not meet method required acceptance criteria of 70-130% recovery for Methyl tert-butyl ether. Recovery was low and associated non-detects in all samples are considered to be estimated results with low bias.

Dilution was performed on sample 061704-HCC-MSD due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.82	Not Detected	4.1	Not Detected
Freon 114	0.82	Not Detected	5.8	Not Detected
Chloromethane	3.3	Not Detected	6.9	Not Detected
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
1,3-Butadiene	0.82	Not Detected	1.8	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.82	Not Detected	4.7	Not Detected
Ethanol	3.3	Not Detected	6.3	Not Detected
Freon 113	0.82	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Acetone	3.3	7.1	7.9	17
2-Propanol	3.3	Not Detected	8.2	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	3.3	Not Detected	10	Not Detected
Methylene Chloride	0.82	Not Detected	2.9	Not Detected
Methyl tert-butyl ether	0.82	Not Detected U J	3.0	Not Detected U J
trans-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Hexane	0.82	Not Detected	2.9	Not Detected
Vinyl Acetate	3.3	Not Detected	12	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.4	2.4	4.2
cis-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.82	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Cyclohexane	0.82	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.82	Not Detected	5.2	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.9	Not Detected
Benzene	0.82	Not Detected	2.7	Not Detected
1,2-Dichloroethane	0.82	Not Detected	3.4	Not Detected
Heptane	0.82	Not Detected	3.4	Not Detected
Trichloroethene	0.82	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.82	Not Detected	3.8	Not Detected
1,4-Dioxane	3.3	Not Detected	12	Not Detected
Bromodichloromethane	0.82	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.82	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.82	Not Detected	3.4	Not Detected
Toluene	0.82	Not Detected	3.1	Not Detected
trans-1,3-Dichloropropene	0.82	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343B-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.3	Not Detected	14	Not Detected
Dibromochloromethane	0.82	Not Detected	7.1	Not Detected
1,2-Dibromoethane (EDB)	0.82	Not Detected	6.4	Not Detected
Chlorobenzene	0.82	Not Detected	3.8	Not Detected
Ethyl Benzene	0.82	Not Detected	3.6	Not Detected
m,p-Xylene	0.82	Not Detected	3.6	Not Detected
o-Xylene	0.82	Not Detected	3.6	Not Detected
Styrene	0.82	Not Detected	3.5	Not Detected
Bromoform	0.82	Not Detected	8.6	Not Detected
Cumene	0.82	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.82	Not Detected	5.7	Not Detected
Propylbenzene	0.82	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.82	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.82	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.3	Not Detected	25	Not Detected
Hexachlorobutadiene	3.3	Not Detected	36	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Sample Name	061704-HCC-WFD	Sample ID	0406343B-02A
Method	MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN	Method ID	0406343B-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.78	Not Detected	3.9	Not Detected
Freon 114	0.78	Not Detected	5.5	Not Detected
Chloromethane	3.1	Not Detected	6.5	Not Detected
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
1,3-Butadiene	0.78	Not Detected	1.7	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.78	Not Detected	4.4	Not Detected
Ethanol	3.1	25	5.9	48
Freon 113	0.78	Not Detected	6.0	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Acetone	3.1	30	7.5	74
2-Propanol	3.1	Not Detected	7.7	Not Detected
Carbon Disulfide	0.78	12	2.4	37
3-Chloropropene	3.1	Not Detected	9.9	Not Detected
Methylene Chloride	0.78	Not Detected	2.7	Not Detected
Methyl tert-butyl ether	0.78	Not Detected U J	2.8	Not Detected U J
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Hexane	0.78	36	2.8	130
Vinyl Acetate	3.1	Not Detected	11	Not Detected
1,1-Dichloroethane	0.78	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	37	2.3	110
cis-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Tetrahydrofuran	0.78	40	2.3	120
Chloroform	0.78	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Cyclohexane	0.78	24	2.7	84
Carbon Tetrachloride	0.78	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.78	54	3.7	260
Benzene	0.78	14	2.5	47
1,2-Dichloroethane	0.78	Not Detected	3.2	Not Detected
Heptane	0.78	2.1	3.2	8.6
Trichloroethene	0.78	Not Detected	4.2	Not Detected
1,2-Dichloropropane	0.78	Not Detected	3.6	Not Detected
1,4-Dioxane	3.1	Not Detected	11	Not Detected
Bromodichloromethane	0.78	Not Detected	5.3	Not Detected
cis-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.78	3.4	3.2	14
Toluene	0.78	0.99	3.0	3.8
trans-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Tetrachloroethene	0.78	Not Detected	5.3	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343B-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.1	Not Detected	13	Not Detected
Dibromochloromethane	0.78	Not Detected	6.7	Not Detected
1,2-Dibromoethane (EDB)	0.78	Not Detected	6.0	Not Detected
Chlorobenzene	0.78	Not Detected	3.6	Not Detected
Ethyl Benzene	0.78	Not Detected	3.4	Not Detected
m,p-Xylene	0.78	2.7	3.4	12
o-Xylene	0.78	1.5	3.4	6.8
Styrene	0.78	Not Detected	3.4	Not Detected
Bromoform	0.78	Not Detected	8.1	Not Detected
Cumene	0.78	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.78	Not Detected	5.4	Not Detected
Propylbenzene	0.78	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.78	4.0	3.9	20
1,3,5-Trimethylbenzene	0.78	2.1	3.9	11
1,2,4-Trimethylbenzene	0.78	7.4	3.9	37
1,3-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,4-Dichlorobenzene	0.78	17	4.7	110
alpha-Chlorotoluene	0.78	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,2,4-Trichlorobenzene	3.1	Not Detected	23	Not Detected
Hexachlorobutadiene	3.1	Not Detected	34	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5.2	Not Detected	26	Not Detected
Freon 114	5.2	Not Detected	37	Not Detected
Chloromethane	21	Not Detected	44	Not Detected
Vinyl Chloride	5.2	Not Detected	14	Not Detected
1,3-Butadiene	5.2	Not Detected	12	Not Detected
Bromomethane	5.2	Not Detected	21	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
Freon 11	5.2	Not Detected	30	Not Detected
Ethanol	21	33	40	64
Freon 113	5.2	Not Detected	41	Not Detected
1,1-Dichloroethene	5.2	Not Detected	21	Not Detected
Acetone	21	Not Detected	51	Not Detected
2-Propanol	21	Not Detected	52	Not Detected
Carbon Disulfide	5.2	Not Detected	17	Not Detected
3-Chloropropene	21	Not Detected	67	Not Detected
Methylene Chloride	5.2	Not Detected	18	Not Detected
Methyl tert-butyl ether	5.2	Not Detected U J	19	Not Detected U J
trans-1,2-Dichloroethene	5.2	Not Detected	21	Not Detected
Hexane	5.2	250	19	900
Vinyl Acetate	21	Not Detected	75	Not Detected
1,1-Dichloroethane	5.2	Not Detected	22	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.2	20	16	59
cis-1,2-Dichloroethene	5.2	Not Detected	21	Not Detected
Tetrahydrofuran	5.2	97	16	290
Chloroform	5.2	Not Detected	26	Not Detected
1,1,1-Trichloroethane	5.2	Not Detected	29	Not Detected
Cyclohexane	5.2	220	18	760
Carbon Tetrachloride	5.2	Not Detected	34	Not Detected
2,2,4-Trimethylpentane	5.2	680	25	3200
Benzene	5.2	34	17	110
1,2-Dichloroethane	5.2	Not Detected	22	Not Detected
Heptane	5.2	11	22	44
Trichloroethene	5.2	Not Detected	29	Not Detected
1,2-Dichloropropane	5.2	Not Detected	25	Not Detected
1,4-Dioxane	21	Not Detected	77	Not Detected
Bromodichloromethane	5.2	Not Detected	36	Not Detected
cis-1,3-Dichloropropene	5.2	Not Detected	24	Not Detected
4-Methyl-2-pentanone	5.2	Not Detected	22	Not Detected
Toluene	5.2	Not Detected	20	Not Detected
trans-1,3-Dichloropropene	5.2	Not Detected	24	Not Detected
1,1,2-Trichloroethane	5.2	Not Detected	29	Not Detected
Tetrachloroethene	5.2	Not Detected	36	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343B-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

2017/04/10	0406343B-03A	0406343B-03A
0406343B-03A	0406343B-03A	0406343B-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	21	Not Detected	87	Not Detected
Dibromochloromethane	5.2	Not Detected	45	Not Detected
1,2-Dibromoethane (EDB)	5.2	Not Detected	41	Not Detected
Chlorobenzene	5.2	Not Detected	24	Not Detected
Ethyl Benzene	5.2	Not Detected	23	Not Detected
m,p-Xylene	5.2	Not Detected	23	Not Detected
o-Xylene	5.2	Not Detected	23	Not Detected
Styrene	5.2	Not Detected	23	Not Detected
Bromoform	5.2	Not Detected	55	Not Detected
Cumene	5.2	Not Detected	26	Not Detected
1,1,2,2-Tetrachloroethane	5.2	Not Detected	37	Not Detected
Propylbenzene	5.2	Not Detected	26	Not Detected
4-Ethyltoluene	5.2	Not Detected	26	Not Detected
1,3,5-Trimethylbenzene	5.2	Not Detected	26	Not Detected
1,2,4-Trimethylbenzene	5.2	Not Detected	26	Not Detected
1,3-Dichlorobenzene	5.2	Not Detected	32	Not Detected
1,4-Dichlorobenzene	5.2	30	32	180
alpha-Chlorotoluene	5.2	Not Detected	28	Not Detected
1,2-Dichlorobenzene	5.2	Not Detected	32	Not Detected
1,2,4-Trichlorobenzene	21	Not Detected	160	Not Detected
Hexachlorobutadiene	21	Not Detected	230	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343B-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Sample ID: 0406343B-04A	Sample Name: Lab Blank	Sample Type: Air
Sample Date: 11/11/2011	Sample Time: 11:11:11	Sample Location: 11/11/2011

Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406343B-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

0406343B-05A	0406343B-05A	0406343B-05A
0406343B-05A	0406343B-05A	0406343B-05A

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

ANALYST: J. J. J.	DATE: 10/10/01	LABORATORY: AIR TOXICS LTD.
CLIENT: J. J. J.	PROJECT: J. J. J.	REPORT: J. J. J.

Compound	%Recovery
Freon 12	76
Freon 114	91
Chloromethane	100
Vinyl Chloride	84
1,3-Butadiene	89
Bromomethane	91
Chloroethane	131 Q
Freon 11	83
Ethanol	135
Freon 113	78
1,1-Dichloroethene	82
Acetone	101
2-Propanol	102
Carbon Disulfide	87
3-Chloropropene	90
Methylene Chloride	96
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	81
Hexane	95
Vinyl Acetate	109
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	76
Tetrahydrofuran	102
Chloroform	83
1,1,1-Trichloroethane	95
Cyclohexane	88
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	81
Benzene	84
1,2-Dichloroethane	96
Heptane	84
Trichloroethene	86
1,2-Dichloropropane	105
1,4-Dioxane	103
Bromodichloromethane	90
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	114
Toluene	76
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	80
Tetrachloroethene	76

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

10/10/2010	10/10/2010	10/10/2010
10/10/2010	10/10/2010	10/10/2010

Compound	%Recovery
2-Hexanone	126
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	84
Chlorobenzene	78
Ethyl Benzene	74
m,p-Xylene	74
o-Xylene	78
Styrene	87
Bromoform	92
Cumene	76
1,1,2,2-Tetrachloroethane	86
Propylbenzene	59 Q
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	79
1,2,4-Trimethylbenzene	81
1,3-Dichlorobenzene	77
1,4-Dichlorobenzene	76
alpha-Chlorotoluene	129
1,2-Dichlorobenzene	74
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	99	70-130



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

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Page 1 of 1

Contact Person Robin Schiller

Company ENSR

Address 27755 Dehl City Blvd, Suite 111, ZIP 68555

Phone 680.836.1700 FAX 680.836.1711

Collected By: Signature See below

Project Info:

P.O. # 01005-013-360

Project # 01005-013-360

Project Name Hanford, IL

Hanford Community

GAH12

Turn Around Time:

☒ Normal

☐ Rush

Specify

Lab ID	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum
				Initial Final Receipt

01A	061704-HCC - Dursion	06/17/04 1400-1501	Added to 15. chemical solids, methanol	-28.5 -3.0 5.5 mg
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02A	061704-HCC - WFO	06/17/04 1400-1505	Added to 15. chemical solids, methanol, carbon dioxide	-29.0 -3.0 4.8 mg
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03A	061704-HCC - M60	06/17/04 1425-1504		-28.6 -3.0 4.5 mg
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Refrained By (Signature) Date/Time	Received By (Signature) Date/Time
<u>Robin Schiller</u> 06/17/04 1715	<u>ATL</u> 6/18/04 9:54

Refrained By (Signature) Date/Time	Received By (Signature) Date/Time

Refrained By (Signature) Date/Time	Received By (Signature) Date/Time

Shipper Name	At Bill #	Shipped By	Temp. (°C)	Condition	Quantity	State	Initials	Vials	Order #
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Lab	Field Ex	845918016529	158	good	Yes	NO	NO	04063433	
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Only



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406343BR1

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005.093.360 Hartford, IL Hartford
DATE RECEIVED:	6/18/2004	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	7/2/2004		
DATE REISSUED:	7/12/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	061704-HCC-Outside West	Modified TO-15	5.5 "Hg
02A	061704-HCC-WFD	Modified TO-15	4.0 "Hg
03A	061704-HCC-MSD	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA
06A	LCS	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 07/12/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
ENSR
Workorder# 0406343BR1

Three 6 Liter Summa Canister samples were received on June 18, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.
Method Detection Limit	Follow 40CFR Pt.136 App. B	The Method Detection Limit study met all relevant requirements in 40CFR Pt. 136, Appendix B (including a statistically calculated MDL that is less than the Reporting Limit) with the exception that for some compounds the level of the analyte in the spiked

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The daily calibration standard (CCV) analyzed on 06/27/04 did not meet method required acceptance criteria of 70-130% recovery for Methyl tert-butyl ether. Recovery was low and associated non-detects in all samples are considered to be estimated results with low bias.

Dilution was performed on sample 061704-HCC-MSD due to the presence of high level non-target species.

WORK ORDER WAS REISSUED ON 07/12/04 IN ORDER TO CORRECT THE DAILY CALIBRATION RESULTS.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343BR1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	s062748	Date of Collection	6/17/04
Dil. Factor	1.62	Date of Analysis	6/28/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.82	Not Detected	4.1	Not Detected
Freon 114	0.82	Not Detected	5.8	Not Detected
Chloromethane	3.3	Not Detected	6.9	Not Detected
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
1,3-Butadiene	0.82	Not Detected	1.8	Not Detected
Bromomethane	0.82	Not Detected	3.2	Not Detected
Chloroethane	0.82	Not Detected	2.2	Not Detected
Freon 11	0.82	Not Detected	4.7	Not Detected
Ethanol	3.3	Not Detected	6.3	Not Detected
Freon 113	0.82	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Acetone	3.3	7.1	7.9	17
2-Propanol	3.3	Not Detected	8.2	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	3.3	Not Detected	10	Not Detected
Methylene Chloride	0.82	Not Detected	2.9	Not Detected
Methyl tert-butyl ether	0.82	Not Detected U J	3.0	Not Detected U J
trans-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Hexane	0.82	Not Detected	2.9	Not Detected
Vinyl Acetate	3.3	Not Detected	12	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	1.4	2.4	4.2
cis-1,2-Dichloroethene	0.82	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.82	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Cyclohexane	0.82	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.82	Not Detected	5.2	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.9	Not Detected
Benzene	0.82	Not Detected	2.7	Not Detected
1,2-Dichloroethane	0.82	Not Detected	3.4	Not Detected
Heptane	0.82	Not Detected	3.4	Not Detected
Trichloroethene	0.82	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.82	Not Detected	3.8	Not Detected
1,4-Dioxane	3.3	Not Detected	12	Not Detected
Bromodichloromethane	0.82	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.82	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.82	Not Detected	3.4	Not Detected
Toluene	0.82	Not Detected	3.1	Not Detected
trans-1,3-Dichloropropene	0.82	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343BR1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Report No:	061704	Date of Collection:	8/14/04
Site Name:	061704	Date of Analysis:	8/24/04

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.3	Not Detected	14	Not Detected
Dibromochloromethane	0.82	Not Detected	7.1	Not Detected
1,2-Dibromoethane (EDB)	0.82	Not Detected	6.4	Not Detected
Chlorobenzene	0.82	Not Detected	3.8	Not Detected
Ethyl Benzene	0.82	Not Detected	3.6	Not Detected
m,p-Xylene	0.82	Not Detected	3.6	Not Detected
o-Xylene	0.82	Not Detected	3.6	Not Detected
Styrene	0.82	Not Detected	3.5	Not Detected
Bromoform	0.82	Not Detected	8.6	Not Detected
Cumene	0.82	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.82	Not Detected	5.7	Not Detected
Propylbenzene	0.82	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.82	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.82	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.82	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.3	Not Detected	25	Not Detected
Hexachlorobutadiene	3.3	Not Detected	36	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343BR1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	062724	Date of collection	3/17/0
File Path	171-5	Date Analyzed	3/23/01

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.78	Not Detected	3.9	Not Detected
Freon 114	0.78	Not Detected	5.5	Not Detected
Chloromethane	3.1	Not Detected	6.5	Not Detected
Vinyl Chloride	0.78	Not Detected	2.0	Not Detected
1,3-Butadiene	0.78	Not Detected	1.7	Not Detected
Bromomethane	0.78	Not Detected	3.0	Not Detected
Chloroethane	0.78	Not Detected	2.1	Not Detected
Freon 11	0.78	Not Detected	4.4	Not Detected
Ethanol	3.1	25	5.9	48
Freon 113	0.78	Not Detected	6.0	Not Detected
1,1-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Acetone	3.1	30	7.5	74
2-Propanol	3.1	Not Detected	7.7	Not Detected
Carbon Disulfide	0.78	12	2.4	37
3-Chloropropene	3.1	Not Detected	9.9	Not Detected
Methylene Chloride	0.78	Not Detected	2.7	Not Detected
Methyl tert-butyl ether	0.78	Not Detected U J	2.8	Not Detected U J
trans-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Hexane	0.78	36	2.8	130
Vinyl Acetate	3.1	Not Detected	11	Not Detected
1,1-Dichloroethane	0.78	Not Detected	3.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.78	37	2.3	110
cis-1,2-Dichloroethene	0.78	Not Detected	3.1	Not Detected
Tetrahydrofuran	0.78	40	2.3	120
Chloroform	0.78	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Cyclohexane	0.78	24	2.7	84
Carbon Tetrachloride	0.78	Not Detected	5.0	Not Detected
2,2,4-Trimethylpentane	0.78	54	3.7	260
Benzene	0.78	14	2.5	47
1,2-Dichloroethane	0.78	Not Detected	3.2	Not Detected
Heptane	0.78	2.1	3.2	8.6
Trichloroethene	0.78	Not Detected	4.2	Not Detected
1,2-Dichloropropane	0.78	Not Detected	3.6	Not Detected
1,4-Dioxane	3.1	Not Detected	11	Not Detected
Bromodichloromethane	0.78	Not Detected	5.3	Not Detected
cis-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
4-Methyl-2-pentanone	0.78	3.4	3.2	14
Toluene	0.78	0.99	3.0	3.8
trans-1,3-Dichloropropene	0.78	Not Detected	3.6	Not Detected
1,1,2-Trichloroethane	0.78	Not Detected	4.3	Not Detected
Tetrachloroethene	0.78	Not Detected	5.3	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343BR1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	061704-HCC-WFD	DATE OF COLLECTION	03/17/06
FILE #	065	DATE OF ANALYSIS	03/22/06

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	3.1	Not Detected	13	Not Detected
Dibromochloromethane	0.78	Not Detected	6.7	Not Detected
1,2-Dibromoethane (EDB)	0.78	Not Detected	6.0	Not Detected
Chlorobenzene	0.78	Not Detected	3.6	Not Detected
Ethyl Benzene	0.78	Not Detected	3.4	Not Detected
m,p-Xylene	0.78	2.7	3.4	12
o-Xylene	0.78	1.5	3.4	6.8
Styrene	0.78	Not Detected	3.4	Not Detected
Bromoform	0.78	Not Detected	8.1	Not Detected
Cumene	0.78	Not Detected	3.9	Not Detected
1,1,2,2-Tetrachloroethane	0.78	Not Detected	5.4	Not Detected
Propylbenzene	0.78	Not Detected	3.9	Not Detected
4-Ethyltoluene	0.78	4.0	3.9	20
1,3,5-Trimethylbenzene	0.78	2.1	3.9	11
1,2,4-Trimethylbenzene	0.78	7.4	3.9	37
1,3-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,4-Dichlorobenzene	0.78	17	4.7	110
alpha-Chlorotoluene	0.78	Not Detected	4.1	Not Detected
1,2-Dichlorobenzene	0.78	Not Detected	4.7	Not Detected
1,2,4-Trichlorobenzene	3.1	Not Detected	23	Not Detected
Hexachlorobutadiene	3.1	Not Detected	34	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	99	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343BR1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5062722	Date of Collection:	3/1/00
Dil. Factor:	10.5	Date of Analysis:	6/28/00

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	5.2	Not Detected	26	Not Detected
Freon 114	5.2	Not Detected	37	Not Detected
Chloromethane	21	Not Detected	44	Not Detected
Vinyl Chloride	5.2	Not Detected	14	Not Detected
1,3-Butadiene	5.2	Not Detected	12	Not Detected
Bromomethane	5.2	Not Detected	21	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
Freon 11	5.2	Not Detected	30	Not Detected
Ethanol	21	33	40	64
Freon 113	5.2	Not Detected	41	Not Detected
1,1-Dichloroethene	5.2	Not Detected	21	Not Detected
Acetone	21	Not Detected	51	Not Detected
2-Propanol	21	Not Detected	52	Not Detected
Carbon Disulfide	5.2	Not Detected	17	Not Detected
3-Chloropropene	21	Not Detected	67	Not Detected
Methylene Chloride	5.2	Not Detected	18	Not Detected
Methyl tert-butyl ether	5.2	Not Detected U J	19	Not Detected U J
trans-1,2-Dichloroethene	5.2	Not Detected	21	Not Detected
Hexane	5.2	250	19	900
Vinyl Acetate	21	Not Detected	75	Not Detected
1,1-Dichloroethane	5.2	Not Detected	22	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.2	20	16	59
cis-1,2-Dichloroethene	5.2	Not Detected	21	Not Detected
Tetrahydrofuran	5.2	97	16	290
Chloroform	5.2	Not Detected	26	Not Detected
1,1,1-Trichloroethane	5.2	Not Detected	29	Not Detected
Cyclohexane	5.2	220	18	760
Carbon Tetrachloride	5.2	Not Detected	34	Not Detected
2,2,4-Trimethylpentane	5.2	680	25	3200
Benzene	5.2	34	17	110
1,2-Dichloroethane	5.2	Not Detected	22	Not Detected
Heptane	5.2	11	22	44
Trichloroethene	5.2	Not Detected	29	Not Detected
1,2-Dichloropropane	5.2	Not Detected	25	Not Detected
1,4-Dioxane	21	Not Detected	77	Not Detected
Bromodichloromethane	5.2	Not Detected	36	Not Detected
cis-1,3-Dichloropropene	5.2	Not Detected	24	Not Detected
4-Methyl-2-pentanone	5.2	Not Detected	22	Not Detected
Toluene	5.2	Not Detected	20	Not Detected
trans-1,3-Dichloropropene	5.2	Not Detected	24	Not Detected
1,1,2-Trichloroethane	5.2	Not Detected	29	Not Detected
Tetrachloroethene	5.2	Not Detected	36	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343BR1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

FILE NAME	061704	DATE OF COLLECTION	5/23/04
FILE #	10-5	DATE OF ANALYSIS	5/23/04 09:15 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	21	Not Detected	87	Not Detected
Dibromochloromethane	5.2	Not Detected	45	Not Detected
1,2-Dibromoethane (EDB)	5.2	Not Detected	41	Not Detected
Chlorobenzene	5.2	Not Detected	24	Not Detected
Ethyl Benzene	5.2	Not Detected	23	Not Detected
m,p-Xylene	5.2	Not Detected	23	Not Detected
o-Xylene	5.2	Not Detected	23	Not Detected
Styrene	5.2	Not Detected	23	Not Detected
Bromoform	5.2	Not Detected	55	Not Detected
Cumene	5.2	Not Detected	26	Not Detected
1,1,2,2-Tetrachloroethane	5.2	Not Detected	37	Not Detected
Propylbenzene	5.2	Not Detected	26	Not Detected
4-Ethyltoluene	5.2	Not Detected	26	Not Detected
1,3,5-Trimethylbenzene	5.2	Not Detected	26	Not Detected
1,2,4-Trimethylbenzene	5.2	Not Detected	26	Not Detected
1,3-Dichlorobenzene	5.2	Not Detected	32	Not Detected
1,4-Dichlorobenzene	5.2	30	32	180
alpha-Chlorotoluene	5.2	Not Detected	28	Not Detected
1,2-Dichlorobenzene	5.2	Not Detected	32	Not Detected
1,2,4-Trichlorobenzene	21	Not Detected	160	Not Detected
Hexachlorobutadiene	21	Not Detected	230	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343BR1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	05270	Date of Collection	11/11/13
Dil. Factor	1.00	Date of Analysis	6/27/14

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.6	Not Detected
Chloromethane	2.0	Not Detected	4.2	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	2.0	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.9	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	5.0	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.4	Not Detected
Methylene Chloride	0.50	Not Detected	1.8	Not Detected
Methyl tert-butyl ether	0.50	Not Detected U J	1.8	Not Detected U J
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
Vinyl Acetate	2.0	Not Detected	7.2	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.5	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.2	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.4	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.1	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.3	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.1	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.8	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343BR1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	062701	Date of Collection
File Path	00	Date of Analysis 02/01/2001

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Hexanone	2.0	Not Detected	8.3	Not Detected
Dibromochloromethane	0.50	Not Detected	4.3	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.9	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.5	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.5	Not Detected
Propylbenzene	0.50	Not Detected	2.5	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	22	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406343BR1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	052702	Lab Collection NA
Dir: 22010	1-00	Date of Analysis: 02/27/03 10:23 AM

Compound	%Recovery
Freon 12	80
Freon 114	93
Chloromethane	106
Vinyl Chloride	84
1,3-Butadiene	88
Bromomethane	104
Chloroethane	95
Freon 11	85
Ethanol	103
Freon 113	75
1,1-Dichloroethene	82
Acetone	96
2-Propanol	115
Carbon Disulfide	82
3-Chloropropene	100
Methylene Chloride	102
Methyl tert-butyl ether	68 Q
trans-1,2-Dichloroethene	76
Hexane	87
Vinyl Acetate	100
1,1-Dichloroethane	84
2-Butanone (Methyl Ethyl Ketone)	86
cis-1,2-Dichloroethene	86
Tetrahydrofuran	91
Chloroform	76
1,1,1-Trichloroethane	83
Cyclohexane	78
Carbon Tetrachloride	95
2,2,4-Trimethylpentane	88
Benzene	78
1,2-Dichloroethane	82
Heptane	77
Trichloroethene	76
1,2-Dichloropropane	86
1,4-Dioxane	89
Bromodichloromethane	85
cis-1,3-Dichloropropene	84
4-Methyl-2-pentanone	98
Toluene	77
trans-1,3-Dichloropropene	89
1,1,2-Trichloroethane	77
Tetrachloroethene	73

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406343BR1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client: AIR TOXICS LTD.	Job #: 0406343BR1-05A	Date of Collection: 07/10/2004
Site: 100	Lab: 100	Date of Analysis: 07/10/2004

Compound	%Recovery
2-Hexanone	107
Dibromochloromethane	88
1,2-Dibromoethane (EDB)	80
Chlorobenzene	76
Ethyl Benzene	76
m,p-Xylene	73
o-Xylene	77
Styrene	79
Bromoform	91
Cumene	79
1,1,2,2-Tetrachloroethane	83
Propylbenzene	84
4-Ethyltoluene	81
1,3,5-Trimethylbenzene	77
1,2,4-Trimethylbenzene	79
1,3-Dichlorobenzene	75
1,4-Dichlorobenzene	75
alpha-Chlorotoluene	88
1,2-Dichlorobenzene	73
1,2,4-Trichlorobenzene	75
Hexachlorobutadiene	71

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343BR1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	05270	Lab Collection
Dir Factor	100	Date of Analysis 07/01/08

Compound	%Recovery
Freon 12	76
Freon 114	91
Chloromethane	100
Vinyl Chloride	84
1,3-Butadiene	89
Bromomethane	91
Chloroethane	131 Q
Freon 11	83
Ethanol	135
Freon 113	78
1,1-Dichloroethene	82
Acetone	101
2-Propanol	102
Carbon Disulfide	87
3-Chloropropene	90
Methylene Chloride	96
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	81
Hexane	95
Vinyl Acetate	109
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	76
Tetrahydrofuran	102
Chloroform	83
1,1,1-Trichloroethane	95
Cyclohexane	88
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	81
Benzene	84
1,2-Dichloroethane	96
Heptane	84
Trichloroethene	86
1,2-Dichloropropane	105
1,4-Dioxane	103
Bromodichloromethane	90
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	114
Toluene	76
trans-1,3-Dichloropropene	105
1,1,2-Trichloroethane	80
Tetrachloroethene	76

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343BR1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	008-20	Sample Collection No
Dilution	100	Phase/Analyte

Compound	%Recovery
2-Hexanone	126
Dibromochloromethane	93
1,2-Dibromoethane (EDB)	84
Chlorobenzene	78
Ethyl Benzene	74
m,p-Xylene	74
o-Xylene	78
Styrene	87
Bromoform	92
Cumene	76
1,1,2,2-Tetrachloroethane	86
Propylbenzene	59 Q
4-Ethyltoluene	84
1,3,5-Trimethylbenzene	79
1,2,4-Trimethylbenzene	81
1,3-Dichlorobenzene	77
1,4-Dichlorobenzene	76
alpha-Chlorotoluene	129
1,2-Dichlorobenzene	74
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	99	70-130



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406343C

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005.093.360 Hartford, IL Hartford
DATE RECEIVED:	6/18/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	6/30/04		

FRACTION

NAME

TEST

RECEIPT VAC./PRES.

01A	061704-HCC-Outside West	Modified TO-15	5.5 "Hg
02A	061704-HCC-WFD	Modified TO-15	4.0 "Hg
03A	061704-HCC-MSD	Modified TO-15	4.5 "Hg
04A	Lab Blank	Modified TO-15	NA
05A	CCV	Modified TO-15	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/30/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Ozone Precursors by Modified TO-15
ENSR
Workorder# 0406343C

Three 6 Liter Summa Canister samples were received on June 18, 2004. The laboratory performed analysis for Ozone Precursors via Modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol	SW-846 protocol
IS Recoveries	60- 140% of mean over ICAL for blanks, and w/in 60- 140% of daily CCV for samples.	Within 60-140% of CCV recoveries for blank and samples.
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	70 - 130 %	60-140% for 90% of the target compounds
Concentration of IS spike	10 ppbv	25 ppbv
Concentration of IS spike	10 ppbv	25 ppbv

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit(background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rot. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.82	Not Detected	2.7	Not Detected
Ethyl Benzene	0.82	Not Detected	3.6	Not Detected
Styrene	0.82	Not Detected	3.5	Not Detected
Toluene	0.82	Not Detected	3.1	Not Detected
1,2,4-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.82	Not Detected	4.1	Not Detected
m,p-Xylene	0.82	Not Detected	3.6	Not Detected
o-Xylene	0.82	Not Detected	3.6	Not Detected
Butane	3.3	Not Detected	7.9	Not Detected
1-Butene	3.3	Not Detected	7.6	Not Detected
cis-2-Butene	3.3	Not Detected	7.6	Not Detected
trans-2-butene	3.3	Not Detected	7.6	Not Detected
Cyclohexane	3.3	Not Detected	11	Not Detected
Cyclopentane	3.3	Not Detected	9.6	Not Detected
2,2-Dimethylbutane	3.3	Not Detected	12	Not Detected
2,3-Dimethylbutane	3.3	Not Detected	12	Not Detected
2,3-Dimethylpentane	3.3	Not Detected	14	Not Detected
2,4-Dimethylpentane	3.3	Not Detected	14	Not Detected
Heptane	3.3	Not Detected	14	Not Detected
Hexane	3.3	Not Detected	12	Not Detected
Isoprene	3.3	Not Detected	9.3	Not Detected
Cumene	3.3	Not Detected	16	Not Detected
Isopentane	3.3	3.6	9.8	11
Methylcyclohexane	3.3	Not Detected	13	Not Detected
Methylcyclopentane	3.3	Not Detected	11	Not Detected
2-Methylheptane	3.3	Not Detected	16	Not Detected
3-Methylheptane	3.3	Not Detected	16	Not Detected
2-Methylhexane	3.3	Not Detected	14	Not Detected
3-Methylhexane	3.3	Not Detected	14	Not Detected
2-Methylpentane	3.3	Not Detected	12	Not Detected
3-Methylpentane	3.3	Not Detected	12	Not Detected
Isobutane	3.3	Not Detected	7.9	Not Detected
Nonane	3.3	Not Detected	17	Not Detected
Octane	3.3	Not Detected	16	Not Detected
Pentane	3.3	Not Detected	9.8	Not Detected
1-Pentene	3.3	Not Detected	9.6	Not Detected
cis-2-Pentene	3.3	Not Detected	9.6	Not Detected
trans-2-Pentene	3.3	Not Detected	9.6	Not Detected
Propylbenzene	3.3	Not Detected	16	Not Detected
2,2,4-Trimethylpentane	3.3	Not Detected	16	Not Detected
2,3,4-Trimethylpentane	3.3	Not Detected	16	Not Detected
1-Hexene	3.3	Not Detected	11	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343C-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	3.3	Not Detected	16	Not Detected
4-Ethyltoluene	3.3	Not Detected	16	Not Detected
2-Ethyltoluene	3.3	Not Detected	16	Not Detected
Decane	3.3	Not Detected	19	Not Detected
1,2,3-Trimethylbenzene	3.3	Not Detected	16	Not Detected
1,3-Diethylbenzene	3.3	Not Detected	18	Not Detected
1,4-Diethylbenzene	3.3	Not Detected	18	Not Detected
Undecane	3.3	Not Detected	21	Not Detected
cis-2-Hexene	8.2	Not Detected	29	Not Detected
trans-2-Hexene	8.2	Not Detected	29	Not Detected
alpha-Pinene	8.2	Not Detected	46	Not Detected
beta-Pinene	8.2	Not Detected	46	Not Detected
Cyclopentene	3.3	Not Detected	9.3	Not Detected
1-Undecene	8.2	Not Detected	52	Not Detected
1-Decene	8.2	Not Detected	48	Not Detected
1-Nonene	3.3	Not Detected	17	Not Detected
1-Octene	3.3	Not Detected	15	Not Detected
1-Heptene	3.3	Not Detected	13	Not Detected
1,3-Butadiene	0.82	Not Detected	1.8	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	70%	4.2
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	16	18	50	58
Ethyl Benzene	16	Not Detected	68	Not Detected
Styrene	16	Not Detected	67	Not Detected
Toluene	16	Not Detected	59	Not Detected
1,2,4-Trimethylbenzene	16	Not Detected	77	Not Detected
1,3,5-Trimethylbenzene	16	Not Detected	77	Not Detected
m,p-Xylene	16	Not Detected	68	Not Detected
o-Xylene	16	Not Detected	68	Not Detected
Butane	62	1600	150	3900
1-Butene	62	Not Detected	140	Not Detected
cis-2-Butene	62	Not Detected	140	Not Detected
trans-2-butene	62	Not Detected	140	Not Detected
Cyclohexane	62	Not Detected	220	Not Detected
Cyclopentane	62	Not Detected	180	Not Detected
2,2-Dimethylbutane	62	Not Detected	220	Not Detected
2,3-Dimethylbutane	62	160	220	590
2,3-Dimethylpentane	62	77	260	320
2,4-Dimethylpentane	62	Not Detected	260	Not Detected
Heptane	62	Not Detected	260	Not Detected
Hexane	62	Not Detected	220	Not Detected
Isoprene	62	Not Detected	180	Not Detected
Cumene	62	Not Detected	310	Not Detected
Isopentane	62	3000	180	9100
Methylcyclohexane	62	Not Detected	250	Not Detected
Methylcyclopentane	62	93	220	330
2-Methylheptane	62	Not Detected	290	Not Detected
3-Methylheptane	62	Not Detected	290	Not Detected
2-Methylhexane	62	Not Detected	260	Not Detected
3-Methylhexane	62	Not Detected	260	Not Detected
2-Methylpentane	62	280	220	1000
3-Methylpentane	62	230	220	830
Isobutane	62	850	150	2100
Nonane	62	Not Detected	330	Not Detected
Octane	62	Not Detected	290	Not Detected
Pentane	62	610	180	1800
1-Pentene	62	Not Detected	180	Not Detected
cis-2-Pentene	62	120	180	340
trans-2-Pentene	62	Not Detected	180	Not Detected
Propylbenzene	62	Not Detected	310	Not Detected
2,2,4-Trimethylpentane	62	66	290	310
2,3,4-Trimethylpentane	62	Not Detected	290	Not Detected
1-Hexene	62	Not Detected	220	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343C-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	62	Not Detected	310	Not Detected
4-Ethyltoluene	62	Not Detected	310	Not Detected
2-Ethyltoluene	62	Not Detected	310	Not Detected
Decane	62	Not Detected	370	Not Detected
1,2,3-Trimethylbenzene	62	Not Detected	310	Not Detected
1,3-Diethylbenzene	62	Not Detected	340	Not Detected
1,4-Diethylbenzene	62	Not Detected	340	Not Detected
Undecane	62	Not Detected	400	Not Detected
cis-2-Hexene	160	Not Detected	540	Not Detected
trans-2-Hexene	160	Not Detected	540	Not Detected
alpha-Pinene	160	Not Detected	880	Not Detected
beta-Pinene	160	Not Detected	880	Not Detected
Cyclopentene	62	Not Detected	180	Not Detected
1-Undecene	160	Not Detected	990	Not Detected
1-Decene	160	Not Detected	900	Not Detected
1-Nonene	62	Not Detected	320	Not Detected
1-Octene	62	Not Detected	290	Not Detected
1-Heptene	62	Not Detected	250	Not Detected
1,3-Butadiene	16	Not Detected	35	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	41%	320
Tridecane	629-50-5	70%	4300
1-Dodecene	112-41-4	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	210	Not Detected	680	Not Detected
Ethyl Benzene	210	Not Detected	930	Not Detected
Styrene	210	Not Detected	910	Not Detected
Toluene	210	Not Detected	810	Not Detected
1,2,4-Trimethylbenzene	210	Not Detected	1000	Not Detected
1,3,5-Trimethylbenzene	210	Not Detected	1000	Not Detected
m,p-Xylene	210	Not Detected	930	Not Detected
o-Xylene	210	Not Detected	930	Not Detected
Butane	840	12000	2000	28000
1-Butene	840	Not Detected	2000	Not Detected
cis-2-Butene	840	Not Detected	2000	Not Detected
trans-2-butene	840	Not Detected	2000	Not Detected
Cyclohexane	840	Not Detected	2900	Not Detected
Cyclopentane	840	Not Detected	2400	Not Detected
2,2-Dimethylbutane	840	Not Detected	3000	Not Detected
2,3-Dimethylbutane	840	1800	3000	6400
2,3-Dimethylpentane	840	840	3500	3500
2,4-Dimethylpentane	840	Not Detected	3500	Not Detected
Heptane	840	Not Detected	3500	Not Detected
Hexane	840	Not Detected	3000	Not Detected
Isoprene	840	Not Detected	2400	Not Detected
Cumene	840	Not Detected	4200	Not Detected
Isopentane	840	34000	2500	100000
Methylcyclohexane	840	Not Detected	3400	Not Detected
Methylcyclopentane	840	Not Detected	2900	Not Detected
2-Methylheptane	840	Not Detected	4000	Not Detected
3-Methylheptane	840	Not Detected	4000	Not Detected
2-Methylhexane	840	Not Detected	3500	Not Detected
3-Methylhexane	840	Not Detected	3500	Not Detected
2-Methylpentane	840	2800	3000	9900
3-Methylpentane	840	2000	3000	7300
Isobutane	840	8400	2000	20000
Nonane	840	Not Detected	4500	Not Detected
Octane	840	Not Detected	4000	Not Detected
Pentane	840	4200	2500	12000
1-Pentene	840	Not Detected	2400	Not Detected
cis-2-Pentene	840	Not Detected	2400	Not Detected
trans-2-Pentene	840	Not Detected	2400	Not Detected
Propylbenzene	840	Not Detected	4200	Not Detected
2,2,4-Trimethylpentane	840	Not Detected	4000	Not Detected
2,3,4-Trimethylpentane	840	Not Detected	4000	Not Detected
1-Hexene	840	Not Detected	2900	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343C-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	840	Not Detected	4200	Not Detected
4-Ethyltoluene	840	Not Detected	4200	Not Detected
2-Ethyltoluene	840	Not Detected	4200	Not Detected
Decane	840	Not Detected	5000	Not Detected
1,2,3-Trimethylbenzene	840	Not Detected	4200	Not Detected
1,3-Diethylbenzene	840	Not Detected	4700	Not Detected
1,4-Diethylbenzene	840	Not Detected	4700	Not Detected
Undecane	840	Not Detected	5500	Not Detected
cis-2-Hexene	2100	Not Detected	7400	Not Detected
trans-2-Hexene	2100	Not Detected	7400	Not Detected
alpha-Pinene	2100	Not Detected	12000	Not Detected
beta-Pinene	2100	Not Detected	12000	Not Detected
Cyclopentene	840	Not Detected	2400	Not Detected
1-Undecene	2100	Not Detected	13000	Not Detected
1-Decene	2100	Not Detected	12000	Not Detected
1-Nonene	840	Not Detected	4400	Not Detected
1-Octene	840	Not Detected	3900	Not Detected
1-Heptene	840	Not Detected	3400	Not Detected
1,3-Butadiene	210	Not Detected	470	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.5	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Butane	2.0	Not Detected	4.8	Not Detected
1-Butene	2.0	Not Detected	4.7	Not Detected
cis-2-Butene	2.0	Not Detected	4.7	Not Detected
trans-2-butene	2.0	Not Detected	4.7	Not Detected
Cyclohexane	2.0	Not Detected	7.0	Not Detected
Cyclopentane	2.0	Not Detected	5.8	Not Detected
2,2-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylbutane	2.0	Not Detected	7.2	Not Detected
2,3-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
2,4-Dimethylpentane	2.0	Not Detected	8.3	Not Detected
Heptane	2.0	Not Detected	8.3	Not Detected
Hexane	2.0	Not Detected	7.2	Not Detected
Isoprene	2.0	Not Detected	5.7	Not Detected
Cumene	2.0	Not Detected	10	Not Detected
Isopentane	2.0	Not Detected	6.0	Not Detected
Methylcyclohexane	2.0	Not Detected	8.2	Not Detected
Methylcyclopentane	2.0	Not Detected	7.0	Not Detected
2-Methylheptane	2.0	Not Detected	9.5	Not Detected
3-Methylheptane	2.0	Not Detected	9.5	Not Detected
2-Methylhexane	2.0	Not Detected	8.3	Not Detected
3-Methylhexane	2.0	Not Detected	8.3	Not Detected
2-Methylpentane	2.0	Not Detected	7.2	Not Detected
3-Methylpentane	2.0	Not Detected	7.2	Not Detected
Isobutane	2.0	Not Detected	4.8	Not Detected
Nonane	2.0	Not Detected	11	Not Detected
Octane	2.0	Not Detected	9.5	Not Detected
Pentane	2.0	Not Detected	6.0	Not Detected
1-Pentene	2.0	Not Detected	5.8	Not Detected
cis-2-Pentene	2.0	Not Detected	5.8	Not Detected
trans-2-Pentene	2.0	Not Detected	5.8	Not Detected
Propylbenzene	2.0	Not Detected	10	Not Detected
2,2,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
2,3,4-Trimethylpentane	2.0	Not Detected	9.5	Not Detected
1-Hexene	2.0	Not Detected	7.0	Not Detected

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343C-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

6062505	6062505
100	6062505

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
3-Ethyltoluene	2.0	Not Detected	10	Not Detected
4-Ethyltoluene	2.0	Not Detected	10	Not Detected
2-Ethyltoluene	2.0	Not Detected	10	Not Detected
Decane	2.0	Not Detected	12	Not Detected
1,2,3-Trimethylbenzene	2.0	Not Detected	10	Not Detected
1,3-Diethylbenzene	2.0	Not Detected	11	Not Detected
1,4-Diethylbenzene	2.0	Not Detected	11	Not Detected
Undecane	2.0	Not Detected	13	Not Detected
cis-2-Hexene	5.0	Not Detected	17	Not Detected
trans-2-Hexene	5.0	Not Detected	17	Not Detected
alpha-Pinene	5.0	Not Detected	28	Not Detected
beta-Pinene	5.0	Not Detected	28	Not Detected
Cyclopentene	2.0	Not Detected	5.7	Not Detected
1-Undecene	5.0	Not Detected	32	Not Detected
1-Decene	5.0	Not Detected	29	Not Detected
1-Nonene	2.0	Not Detected	10	Not Detected
1-Octene	2.0	Not Detected	9.3	Not Detected
1-Heptene	2.0	Not Detected	8.2	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Dodecane	112-40-3	NA	Not Detected
1-Dodecene	112-41-4	NA	Not Detected
Tridecane	629-50-5	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406343C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound	%Recovery
Benzene	98
Ethyl Benzene	99
Styrene	105
Toluene	98
1,2,4-Trimethylbenzene	111
1,3,5-Trimethylbenzene	111
m,p-Xylene	102
o-Xylene	101
Butane	101
1-Butene	89
cis-2-Butene	103
trans-2-butene	103
Cyclohexane	102
Cyclopentane	98
2,2-Dimethylbutane	99
2,3-Dimethylbutane	95
2,3-Dimethylpentane	98
2,4-Dimethylpentane	100
Heptane	96
Hexane	92
Isoprene	104
Cumene	111
Isopentane	99
Methylcyclohexane	100
Methylcyclopentane	95
2-Methylheptane	98
3-Methylheptane	99
2-Methylhexane	101
3-Methylhexane	102
2-Methylpentane	92
3-Methylpentane	91
Isobutane	109
Nonane	100
Octane	95
Pentane	97
1-Pentene	102
cis-2-Pentene	100
trans-2-Pentene	100
Propylbenzene	119
2,2,4-Trimethylpentane	99
2,3,4-Trimethylpentane	98
1-Hexene	93

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406343C-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	1505250	Date of Collection
Dir File	11	Date of Analysis 03/25/09 05:29 PM

Compound	%Recovery
3-Ethyltoluene	120
4-Ethyltoluene	114
2-Ethyltoluene	116
Decane	102
1,2,3-Trimethylbenzene	118
1,3-Diethylbenzene	114
1,4-Diethylbenzene	113
Undecane	112
cis-2-Hexene	102
trans-2-Hexene	98
alpha-Pinene	100
beta-Pinene	114
Cyclopentene	97
1-Undecene	83
1-Decene	117
1-Nonene	95
1-Octene	98
1-Heptene	99
1,3-Butadiene	109

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	104	70-130

Sample Transportation Notice

AIR TOXICS LTD

**180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020**

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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Contact Person <u>ROBIN SCHILLING</u> Company <u>ENSR</u> Address <u>27755 DIEHL CITY WHEELERS STATE RD</u> Zip <u>60555</u> Phone <u>630 836 1700</u> FAX <u>630 836 1711</u> Collected By: Signature <u>[Signature]</u>		Project Info: P.O. # _____ Project # <u>01005-093-90</u> Project Name <u>HASSEND IL</u> <u>HASSEND Community Center</u>		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush _____ Specify _____	
Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum	
				Initial	Final
01A	061704-HCC-DUSON	06/17/04 1420-1501	Airline to 10, chlorinated Solvents, Methanol	-28.5	-3.0 5.5" Hg
02A	061704-HCC-WFO	06/17/04 1420-1503	0.82, methanol, oxygen, Carbon Dioxide	-29.0	-3.0 6.0" Hg
03A	061704-HCC-MSD	06/17/04 1425-1504	11 11	-20.0	-3.0 4.5" Hg
<div style="display: flex; justify-content: space-between;"> <div> Requisitioned By: (Signature) _____ Date/Time _____ <u>Robin Schilling</u> 06/17/04 1715 Requisitioned By: (Signature) _____ Date/Time _____ Requisitioned By: (Signature) _____ Date/Time _____ Requisitioned By: (Signature) _____ Date/Time _____ </div> <div> Received By: (Signature) _____ Date/Time _____ Received By: (Signature) _____ Date/Time _____ Received By: (Signature) _____ Date/Time _____ Received By: (Signature) _____ Date/Time _____ </div> </div>					
Notes: <u>SW 1842</u> <u>injected to 15, chlorinated Solvents per enviro 04024117 plus</u> <u>avg. 1000's methanol 0.82 as per same quote 01211</u> <u>methanol injected ASTM-D1946 per same quote</u> <u>ADD oxygen, Carbon Dioxide</u>			SW 3344 SN 2949 04024117 plus		
Shipper Name <u>Federal</u> Air Bill # <u>84591801629</u>		Opened By: <u>[Signature]</u>	Condition <u>good</u>	Custody Seals Intact? Yes <input type="checkbox"/> No <input type="checkbox"/>	Work Order # <u>04063480</u>
Lab Use Only					



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406343D

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005.093.360 Hartford, IL Hartford

DATE RECEIVED: 06/18/04

CONTACT: Community Center
DeDe Dodge

DATE COMPLETED: 07/02/04

FRACTION #

NAME

TEST

RECEIPT

VAC./PRES.

01A 061704-HCC-Outside West
02A 061704-HCC-WFD
03A 061704-HCC-MSD
03AA 061704-HCC-MSD Duplicate
04A Lab Blank
05A LCS

Air Toxics Ltd. @ 82
Air Toxics Ltd. @ 82
Air Toxics Ltd. @ 82
Air Toxics Ltd. @ 82
Air Toxics Ltd. @ 82
Air Toxics Ltd. @ 82

5.5 "Hg
4.0 "Hg
4.5 "Hg
4.5 "Hg
NA
NA

CERTIFIED BY:

Laboratory Director

DATE: 07/02/04

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Air Toxics Ltd @82
ENSR
Workorder# 0406343D

Three 6 Liter Summa Canister samples were received on June 18, 2004. The laboratory performed analysis for Ethane, Ethene, Acetylene, Propane and Propylene via Air Toxics Limited Method @82. This method describes direct injection of up to 40 mL of sample followed by GC/FID. See the data sheets for the reporting limit for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343D-01A

AIR TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	82	Not Detected
Ethene	82	Not Detected
Acetylene	82	Not Detected
Propane	82	Not Detected
Propylene	82	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.
SAMPLE NAME: 061704-HCC-WFD
ID#: 0406343D-02A
AIR TOXICS LTD. @ 82 GC/FID

061704-HCC-WFD	0406343D-02A	061704-HCC-WFD
061704-HCC-WFD	0406343D-02A	061704-HCC-WFD

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	78	130
Ethene	78	Not Detected
Acetylene	78	Not Detected
Propane	78	510
Propylene	78	290

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343D-03A

AIR TOXICS LTD. @ 82 GC/FID

0406343D-03A	0406343D-03A
--------------	--------------

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	79	240
Ethene	79	Not Detected
Acetylene	79	Not Detected
Propane	79	94
Propylene	79	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD Duplicate

ID#: 0406343D-03AA

AIR TOXICS LTD. @ 82 GC/FID

061704-HCC-MSD Duplicate	0406343D-03AA	0406343D-03AA
0406343D-03AA	0406343D-03AA	0406343D-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	79	240
Ethene	79	Not Detected
Acetylene	79	Not Detected
Propane	79	88
Propylene	79	Not Detected

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343D-04A

AIR TOXICS LTD. @ 82 GC/FID



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Ethane	50	Not Detected
Ethene	50	Not Detected
Acetylene	50	Not Detected
Propane	50	Not Detected
Propylene	50	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343D-05A

AIR TOXICS LTD. @ 82 GC/FID

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Compound	%Recovery
Ethane	105
Ethene	109
Acetylene	117
Propane	97
Propylene	103

Container Type: NA - Not Applicable



Sample Transportation Notice

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Page 1 of 1[illegible]



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406343E

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005.093.360 Hartford, IL Hartford
DATE RECEIVED:	06/18/04	CONTACT:	Community Center DeDe Dodge
DATE COMPLETED:	06/29/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	061704-HCC-Outside West	Modified ASTM D-1946	5.5 "Hg
02A	061704-HCC-WFD	Modified ASTM D-1946	4.0 "Hg
03A	061704-HCC-MSD	Modified ASTM D-1946	4.5 "Hg
04A	Lab Blank	Modified ASTM D-1946	NA
05A	LCS	Modified ASTM D-1946	NA

CERTIFIED BY:

Laboratory Director

DATE: 07/02/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- A1 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified ASTM D-1946
ENSR
Workorder# 0406343E

Three 6 Liter Summa Canister samples were received on June 18, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H ₂) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-Outside West

ID#: 0406343E-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	20
Methane	0.00016	0.00021
Carbon Dioxide	0.016	0.038

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-WFD

ID#: 0406343E-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	20
Methane	0.00016	0.021
Carbon Dioxide	0.016	0.050

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: 061704-HCC-MSD

ID#: 0406343E-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	20
Methane	0.00016	0.15
Carbon Dioxide	0.016	0.11

Container Type: 6 Liter Summa Canister

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406343E-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946



Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406343E-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name	00628	Date of Collection
File Path		04/05/2010 10:23:00 AM

Compound	%Recovery
Oxygen	94
Methane	100
Carbon Dioxide	99

Container Type: NA - Not Applicable



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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

FOR THE YEAR 1961

APPENDIX I

AIR TOXICS LTD. - LABORATORY REPORT 0406420					
Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
126EWATKINS-OUT	126 E Watkins. Front of building-adjacent to porch.	Outdoor Air/Grab Summa Canistor	0406420A-01A	Benzene	Mod. TO-15



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406420

Work Order Summary

CLIENT: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

BILL TO: Ms. Robin Schilling
ENSR
27755 Diehl Road
Suite 100
Warrenville, IL 60555

PHONE: 630-836-1700

P.O. # 2017826

FAX: 630-836-1711

PROJECT # 01005-093 Hartford

DATE RECEIVED: 6/23/2004

CONTACT: DeDe Dodge

DATE COMPLETED: 6/28/2004

FRACTION #

NAME

TEST

RECEIPT

VAC/PRES.

01A

126EWATKINS-OUT

Modified TO-15

4.5 "Hg

02A

Lab Blank

Modified TO-15

NA

03A

CCV

Modified TO-15

NA

04A

LCS

Modified TO-15

NA

CERTIFIED BY:

Laboratory Director

DATE: 06/28/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE

Modified TO-15

ENSR

Workorder# 0406420

One 6 Liter Summa Canister sample was received on June 23, 2004. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A/TO-15</i>	<i>ATL Modifications</i>
BFB acceptance criteria	CLP protocol (TO-15)	SW-846 protocol
Concentration of IS spike	10 ppbv (TO-15)	25 ppbv
Dilutions for initial calibration	Dynamic dilutions or static using canisters	Syringe dilutions
Daily CCV	$\leq 30\%$ Difference	$\leq 30\%$ Difference with two allowed out up to $\leq 40\%$; flag and narrate outliers
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Sample Drying System	Nafion Dryer (TO-14A)	Multisorbent
Sample Load Volume	400 mL (TO-14A)	Varied to 0.2 L.
Blank Acceptance Criteria.	< 0.20 ppbv (TO-14A)	$< \text{RL}$
BFB Absolute Abundance Criteria (TO-14A)	Within 10% of that from the previous day.	CCV internal standard area counts are compared to ICAL, corrective action for $> 40\%$ D.
Initial Calibration	$\leq 30\%$ RSD (TO-14A)	$\leq 30\%$ RSD with 2 compounds allowed out to $\leq 40\%$ RSD.
IS Recoveries	Within 40% of mean over ICAL for blanks, and within 40 % of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blank and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated Peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 126EWATKINS-OUT

ID#: 0406420-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

#100011	006-011	00001 Colwell	22
011-011	011-011	01101 Amy	020/01/01

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.79	Not Detected	2.6	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406420-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name	d06260	0156420-02A
File Path	10	10156420-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130

AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0406420-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN



Compound		%Recovery
Benzene		96
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406420-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

APPROXIMATE DATE OF COLLECTION	06/25/01	DATE OF COLLECTION	
DATE OF ANALYSIS	07/01/01	DATE OF ANALYSIS	07/24/01

Compound		%Recovery
Benzene		109
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130



Sample Transportation Notice

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Contact Person <u>Dave Schwacher</u> Company <u>ENSR</u> Address <u>27755 Diehl Road, Wrentham, MA 01555</u> Phone <u>508-836-1700</u> FAX _____ Collected By: Signature <u>[Signature]</u>		Project info: P.O. # _____ Project # <u>010050043</u> Project Name <u>Hartford</u>		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush _____ Specify _____	
Lab ID: <u>Q1X</u>	Field Sample I.D.: <u>126EWATKINS-OUT 6/23/04 13:00</u>	Date & Time: <u>6/23/04</u>	Analyses Requested: <u>TO15 - Benzene only</u>	Canister Pressure / Vacuum Initial: <u>-33.0</u> Final: <u>-5.0</u>	Receipt: <u>4.5 kg 6/23/04</u>
Notes:					
Requested By: Signature <u>[Signature]</u> Date/Time <u>6/23/04</u> Received By: Signature <u>[Signature]</u> Date/Time <u>6/23/04</u> Requisition # <u>167240</u>					
Requisitioned By: Signature _____ Date/Time _____ Received By: Signature _____ Date/Time _____					
Shipper Name: <u>FedEx</u> Tracking #: <u>83067445936</u>					
Condition: <u>Good</u>					
Check for Spill/Leakage: <u>No</u>					
Make Order #: <u>0406420</u>					

APPENDIX J

AIR TOXICS LTD. - LABORATORY REPORT 0406483

Field Sample ID	Sample Location Description	Type/Container	Laboratory Sample ID	Analysis	Method
062404-HMW3	Vapor sample from monitoring well HMW-3 located on the north end of North Olive street; sample collected inside well casing approximately 1 foot below.	Soil Vapor/Grab Tedlar bag	0406483A-01A	Sulfur Gases	ASTM D-5504



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406483

Work Order Summary

CLIENT:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555	BILL TO:	Ms. Robin Schilling ENSR 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	P.O. #	2017826
FAX:	630-836-1711	PROJECT #	01005-093 Hartford
DATE RECEIVED:	6/25/04	CONTACT:	DeDe Dodge
DATE COMPLETED:	6/26/04		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	062404-HMW3	ASTM D-5504	Tedlar Bag
01AA	062404-HMW3 Duplicate	ASTM D-5504	Tedlar Bag
02A	Lab Blank	ASTM D-5504	NA
03A	LCS	ASTM D-5504	NA

CERTIFIED BY:

Laboratory Director

DATE: 06/26/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- A1 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
ASTM D-5504
ENSR
Workorder# 0406483

One 5 Liter Tedlar Bag sample was received on June 25, 2004. The laboratory performed the analysis of sulfur compounds via ASTM D-5504 using GC/SCD. The method involves direct injection of the air sample into the GC via a fixed 1.0 mL sampling loop. See the data sheets for the reporting limits for each compound.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Ethyl Methyl Sulfide and n-Butyl Mercaptan coelute with 3-Methyl Thiophene. The corresponding peak is reported as 3-Methyl Thiophene.

Sample 062404-HMW3 was received with insufficient time remaining to analyze within the method specified 24 hour hold time.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
 - J - Estimated value.
 - E - Exceeds instrument calibration range.
 - S - Saturated peak.
 - Q - Exceeds quality control limits.
 - U - Compound analyzed for but not detected above the detection limit.
 - M - Reported value may be biased due to apparent matrix interferences.
- File extensions may have been used on the data analysis sheets and indicates as follows:
- a-File was requantified
 - b-File was quantified by a second column and detector
 - r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: 062404-HMW3

ID#: 0406483-01A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name: 062404-HMW3	062404-HMW3	062404-HMW3
Client: J	J	0406483-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	530
Carbonyl Sulfide	4.0	4.1
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	4.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	7.6
n-Propyl Mercaptan	4.0	4.9
Ethyl Methyl Sulfide	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	52
Diethyl Sulfide	4.0	Not Detected
Butyl Mercaptan	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
3-Methylthiophene	4.0	4.5
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

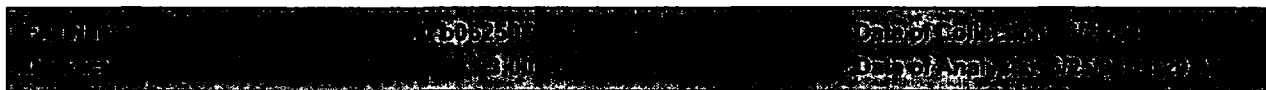
Container Type: 5 Liter Tedlar Bag

AIR TOXICS LTD.

SAMPLE NAME: 062404-HMW3 Duplicate

ID#: 0406483-01AA

SULFUR GASES BY ASTM D-5504 GC/SCD



Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	12	510
Carbonyl Sulfide	12	Not Detected
Methyl Mercaptan	12	Not Detected
Ethyl Mercaptan	12	Not Detected
Dimethyl Sulfide	12	Not Detected
Carbon Disulfide	12	Not Detected
Isopropyl Mercaptan	12	Not Detected
tert-Butyl Mercaptan	12	Not Detected
n-Propyl Mercaptan	12	Not Detected
Ethyl Methyl Sulfide	12	Not Detected
Thiophene	12	Not Detected
Isobutyl Mercaptan	12	55
Diethyl Sulfide	12	Not Detected
Butyl Mercaptan	12	Not Detected
Dimethyl Disulfide	12	Not Detected
3-Methylthiophene	12	13
Tetrahydrothiophene	12	Not Detected
2-Ethylthiophene	12	Not Detected
2,5-Dimethylthiophene	12	Not Detected
Diethyl Disulfide	12	Not Detected

Container Type: 5 Liter Tedlar Bag

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0406483-02A

SULFUR GASES BY ASTM D-5504 GC/SCD

File Name	b06250	Date/Time
Dir Path		Date/Time

Compound	Rpt. Limit (ppbv)	Amount (ppbv)
Hydrogen Sulfide	4.0	Not Detected
Carbonyl Sulfide	4.0	Not Detected
Methyl Mercaptan	4.0	Not Detected
Ethyl Mercaptan	4.0	Not Detected
Dimethyl Sulfide	4.0	Not Detected
Carbon Disulfide	4.0	Not Detected
Isopropyl Mercaptan	4.0	Not Detected
tert-Butyl Mercaptan	4.0	Not Detected
n-Propyl Mercaptan	4.0	Not Detected
Ethyl Methyl Sulfide	4.0	Not Detected
Thiophene	4.0	Not Detected
Isobutyl Mercaptan	4.0	Not Detected
Diethyl Sulfide	4.0	Not Detected
Butyl Mercaptan	4.0	Not Detected
Dimethyl Disulfide	4.0	Not Detected
3-Methylthiophene	4.0	Not Detected
Tetrahydrothiophene	4.0	Not Detected
2-Ethylthiophene	4.0	Not Detected
2,5-Dimethylthiophene	4.0	Not Detected
Diethyl Disulfide	4.0	Not Detected

Container Type: NA - Not Applicable

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406483-03A

SULFUR GASES BY ASTM D-5504 GC/SCD



Compound	%Recovery
Hydrogen Sulfide	88
Carbonyl Sulfide	83
Methyl Mercaptan	84
Ethyl Mercaptan	88
Dimethyl Sulfide	74
Carbon Disulfide	65 Q
Isopropyl Mercaptan	98
tert-Butyl Mercaptan	98
n-Propyl Mercaptan	101
Ethyl Methyl Sulfide	82
Thiophene	81
Isobutyl Mercaptan	85
Diethyl Sulfide	84
Butyl Mercaptan	82
Dimethyl Disulfide	91
3-Methylthiophene	82
Tetrahydrothiophene	86
2-Ethylthiophene	83
2,5-Dimethylthiophene	83
Diethyl Disulfide	89

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable



FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

Refraining from signing or affixing a signature or this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxica United assumes no liability with respect to the collection, handling or shipping of these samples. Refraining from signing or affixing a signature also indicates agreement to hold harmless, defend, and indemnify Air Toxica Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. No. 606 (800) 467-6922

CHAIN-OF-CUSTODY RECORD

Page 7 of 7

Contact Person <u>Dave Schumacher</u> Company <u>ENSR</u> Address <u>27755 Dahl</u> <u>CA</u> <u>Mariposa</u> <u>State</u> <u>CA</u> <u>Zip</u> <u>95355</u> Phone <u>886-1700</u> <u>FAX</u> <u>886-1711</u> Collected By: <u>Sgt. J. L. Dwyer</u>		Project info: P.O. # _____ Project # <u>0105-093</u> Project Name <u>Hartford</u>		Turn Around Time: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Rush <u>24-hour</u> Specify _____	
Lab I.D. <u>062404-HMW3</u>	Field Sample I.D. <u>062404-HMW3</u>	Date & Time <u>14:10</u>	Analyses Requested <u>ASTM D 5504 Menapkin, Redwood Gutter</u>	Canister Pressure / Vacuum Initial _____ Final _____	Receipt _____
Examined By: <u>Sgt. J. L. Dwyer</u> Date/Time <u>6/25/04</u> Rec'd By: <u>James H. Hannon</u> Date/Time <u>10:10</u> Rec'd By: <u>Sgt. J. L. Dwyer</u> Date/Time _____ Rec'd By: <u>Sgt. J. L. Dwyer</u> Date/Time _____		Notes: <u>2 5-l tedlar bags collected (same sample) in case of breakage during shipment</u>			
Requisitioned By: <u>Sgt. J. L. Dwyer</u> Date/Time _____		Requisitioned By: <u>Sgt. J. L. Dwyer</u> Date/Time _____			
Shipper Name <u>FedEx</u> Air Bill # <u>830677445979</u>		Opened By: <u>JL</u>	Condition <u>Good</u>	Custody Seals Intact <u>Yes</u>	Work Order # <u>0406483</u>
Lab Use Only					